



SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse Ig, Human ads-UNLB
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Not a hazardous substance or mixture

Label elements

GHS-US labeling

Hazard pictograms (GHS-US)

Not a hazardous substance or mixture

Other hazards none

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Boric Acid	(CAS No.) 10043-35-3 / [EINECS(EC#)] 201-191-5	0.6%
Sodium Tetraborate	(CAS No.) 1303-96-4 / [EINECS(EC#)] 215-540-4	0.95%
Sodium Chloride	(CAS No.) 7647-14-5 / [EINECS(EC#)] 231-598-3	0.4%

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures

Description of first aid measures

First-aid measures general

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Consult a physician.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Consult a physician.

First-aid measures after skin contact

Flush contaminated skin with plenty of water and soap. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention. If necessary, call a poison center.

Most important symptoms and effects, acute and delayed

Potential acute health effects

Eye contact

No known significant effects or critical hazards

Inhalation

No known significant effects or critical hazards

Skin contact

No known significant effects or critical hazards

Ingestion

Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact

No specific data

Inhalation

No specific data

Skin contact

No specific data

Ingestion

No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments

No specific treatment.

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

No special hazards determined

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be

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taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Small spill: As a precautionary measure, treat spilled material with a 1:10 bleach/water solution. Stop leak if without risk. Move containers from spill area. Absorb with an inert dry material and place in an appropriate waste disposal container. Comply with applicable waste disposal regulations.

Large spill: As a precautionary measure, treat spilled material with a 1:10 bleach/water solution. Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: This product should be handled as though capable of transmitting infectious diseases. Universal precautions should be followed when using this product. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Recommended storage temperature: 2 - 8°C

Rev. 30-Apr-15

SECTION 8: Exposure controls/personal protection

Control parameters

Component	CAS-No.	Value	Control parameters	Basis
Sodium Tetraborate	1303-96-4	TWA	5 mg/m ³	USA. NIOSH
			10 mg/m ³	MAC (NL)
			10 mg/m ³	TLV (US)

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Environmental exposure controls

Do no let product enter drains.

Personal protective equipment

Protective goggles, gloves



Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Rev. 30-Apr-15

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Appearance

Physical state	: Liquid
Color	: Clear
Odor	: Not available
Odor threshold	: Not available
pH	: ~8.2
Melting point	: Not available
Boiling point	: Not available
Flash Point	: Not available
Burning time	: Not applicable
Burning rate	: Not applicable
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients. This material is hygroscopic.
Chemical Stability	The product is stable under recommended storage conditions.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data
Incompatible Materials	Zirconium, strong acids, metallic salts
Hazardous Decomposition Products	No specific data

SECTION 11: Toxicological information**Information on toxicological effects**

Acute toxicity	No data available
Conclusion/Summary:	To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.
Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Boric acid (CAS# 10043-35-3) has been identified in 1272/2008/EC as a category 2 Reproductive toxin. This product contains Boric acid at below the hazard concentration limit (<5.5%).
Sodium Tetraborate (CAS# 1303-96-4) has been identified in 1272/2008/EC as a category 2 Reproductive toxin. This product contains Sodium Tetraborate at below the hazard concentration limit (<8.5%).

Teratogenicity: No data available

Specific target organ toxicity (single exposure): No data available

Specific target organ toxicity (repeated exposure): No data available

Aspiration hazard: No data available

Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, and Inhalation.

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards.

Skin contact: No known significant effects or critical hazards.

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

SECTION 12: Ecological information

Toxicity	No data available
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	No data available

SECTION 13: Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within users premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

U.S. Federal regulations

TSCA: All components are listed or exempted.

Clean Water Act (CWA) 311: All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed

Clean Air Act Section 602 Class I Substances Not listed

Clean Air Act Section 602 Class II Substances Not listed

DEA List I Chemicals (Precursor Chemicals) Not listed

DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304

Composition/information on ingredients

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Rev. 30-Apr-15

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SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

State regulations

New York

Sodium Tetraborate 1303-96-4

Pennsylvania

Sodium Tetraborate 1303-96-4

Minnesota

Sodium Tetraborate 1303-96-4

Rhode Island

Sodium Tetraborate 1303-96-4

Canada inventory All components are listed or exempted.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

Malaysia Inventory (EHS Register): Not determined.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed

Chemical Weapons Convention List Schedule II Chemicals Not listed

Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30-Apr-15

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

NFPA health : 0 - No unusual hazard

NFPA fire hazard : 0 - Not combustible

NFPA reactivity : 0 - Not reactive when mixed with water

HMIS III Rating

Health : 0- Minimal Hazard

Flammability : 0 - Minimal Hazard

Physical : 0 - Minimal Hazard



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Rev. 30-Apr-15

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SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse Ig, Human ads-AP
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Acute Toxicity Oral - Category 5

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) None

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H303 – May be harmful if swallowed
Precautionary statements (GHS-US)	P262 – Do not get in eyes, on skin, or on clothing.
Prevention	P264 – Wash hands, forearms, and exposed areas thoroughly after handling. P270 – Do not eat, drink, or smoke when using this product.
Response	P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
Storage	Not applicable
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other hazards	Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or plumbing copper. Sodium azide is rapidly absorbed through skin.

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Glycerol	(CAS No.) 56-81-5 / [EINECS(EC#)] 200-289-5	50%
Sodium Azide	(CAS No.) 26628-22-8 / [EINECS(EC#)] 247-852-1	0.1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures**Description of first aid measures****First-aid measures general**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician.

Most important symptoms and effects, acute and delayed**Potential acute health effects**

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards

Ingestion May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact	No specific data
Inhalation	No specific data
Skin contact	No specific data
Ingestion	No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Carbon oxides, nitrogen oxides (NOx)

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Rev. 30-Apr-15

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Methods and material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

Control parameters

Sodium Azide (26628-22-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	Absorbed through skin. Notes NaN ₃ CEIL: 0.3 mg/m ³ , (NaN ₃)
USA NIOSH	NIOSH REL (TWA) (ppm)	Absorbed through skin. Notes As HN ₃ CEIL: 0.1 ppm, (as HN ₃)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Absorbed through skin. Notes as NaN ₃ CEIL: 0.3 mg/m ³ , (as NaN ₃)
USA OSHA	OSHA PEL (TWA) (ppm)	Absorbed through skin. Notes as HN ₃ CEIL: 0.1 ppm, (as HN ₃)
Glycerol (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Respirable Fraction 5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Total Dust 15 mg/m ³

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Do not let product enter drains. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

Protective goggles, gloves

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance**Physical state**

: Liquid

Color

: Colorless

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: Not available

Boiling point

: Not available

Flash Point

: Not available

Burning time

: Not applicable

Burning rate

: Not applicable

Evaporation rate

: Not available

Flammability (solid, gas)

: Not available

Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data.
Incompatible Materials	Strong oxidizers, acids, metals, water. (Note: Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of HIGHLY EXPLOSIVE compounds of lead azide and copper azide.)
Hazardous Decomposition Products	No specific data.

SECTION 11: Toxicological information**Information on toxicological effects****Acute toxicity**

Product/ingredient	Result	Species	Dose	Exposure
Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Glycerol	LD50 Oral	Rat	12,600 mg/kg	-

Conclusion/Summary: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation: No data available

Serious eye damage/irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Azide	Equivocal - Oral - TD	Rat	5460 mg/kg	78 weeks Continuous
	Equivocal - Oral - TDLo	Rat	2730 mg/kg	78 weeks Continuous

Reproductive toxicity: Not available

Teratogenicity: Not available

Specific target organ toxicity (single exposure): Not available

Specific target organ toxicity (repeated exposure): Not available

Aspiration hazard: Not available

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Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation, skin or eye contact

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional Information

RTECS: VY8050000

RTECS: MA8050000

SECTION 12: Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 ug/L Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 ug/L Marine water	Algae - Macrocystis pyrifera	96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil

Soil/water partition coefficient (KOC) Not available

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Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within user's premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information**U.S. Federal regulations**

TSCA: All components are listed or exempted.
Clean Water Act (CWA) 311: disodium
hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	Not listed
Clean Air Act Section 602 Class I Substances	Not listed
Clean Air Act Section 602 Class II Substances	Not listed
DEA List I Chemicals (Precursor Chemicals)	Not listed
DEA List II Chemicals (Essential Chemicals)	Not listed

SARA 302/304**Composition/information on ingredients**

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sodium Azide	0 - 0.1	Yes	500	-	1000	-

SARA 304 RQ 1000000 lbs / 454000 kg

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium Azide	0 - 0.1	No	No	Yes	Yes	No

State regulations

New Jersey

Sodium Azide 26628-22-8
Glycerol 56-81-5

New York

Sodium Azide 26628-22-8

Massachusetts

Sodium Azide 26628-22-8

Pennsylvania

Sodium Azide 26628-22-8
Glycerol 56-81-5

California

Sodium Azide 26628-22-8

Louisiana

Sodium Azide 26628-22-8

Michigan

Sodium Azide 26628-22-8

Minnesota

Sodium Azide 26628-22-8
Glycerol 56-81-5

Rhode Island

Sodium Azide 26628-22-8
Glycerol 56-81-5

Canada inventory All components are listed or exempted.

International regulations

International lists

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed
Chemical Weapons Convention List Schedule II Chemicals Not listed
Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30Apr15

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H303	May be harmful if swallowed
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands, forearms, and exposed areas thoroughly after handling.

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P270	Do not eat, drink, or smoke when using this product.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents and container in accordance with all local, regional, national, and international regulations.

NFPA health hazard : 1 - May be irritating
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water



HMIS III Rating

Health : 1 - Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard

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SDS US (GHS HazCom) - US Only

SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse IgM, Human ads-AP
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Acute Toxicity Oral - Category 5

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) None

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H303 – May be harmful if swallowed
Precautionary statements (GHS-US)	P262 – Do not get in eyes, on skin, or on clothing.
Prevention	P264 – Wash hands, forearms, and exposed areas thoroughly after handling. P270 – Do not eat, drink, or smoke when using this product.
Response	P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
Storage	Not applicable
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other hazards	Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or plumbing copper. Sodium azide is rapidly absorbed through skin.

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Glycerol	(CAS No.) 56-81-5 / [EINECS(EC#)] 200-289-5	50%
Sodium Azide	(CAS No.) 26628-22-8 / [EINECS(EC#)] 247-852-1	0.1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures**Description of first aid measures****First-aid measures general**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician.

Most important symptoms and effects, acute and delayed**Potential acute health effects**

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards

Ingestion May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact	No specific data
Inhalation	No specific data
Skin contact	No specific data
Ingestion	No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Carbon oxides, nitrogen oxides (NO_x)

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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Methods and material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

Control parameters

Sodium Azide (26628-22-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	Absorbed through skin. Notes NaN ₃ CEIL: 0.3 mg/m ³ , (NaN ₃)
USA NIOSH	NIOSH REL (TWA) (ppm)	Absorbed through skin. Notes As HN ₃ CEIL: 0.1 ppm, (as HN ₃)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Absorbed through skin. Notes as NaN ₃ CEIL: 0.3 mg/m ³ , (as NaN ₃)
USA OSHA	OSHA PEL (TWA) (ppm)	Absorbed through skin. Notes as HN ₃ CEIL: 0.1 ppm, (as HN ₃)
Glycerol (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Respirable Fraction 5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Total Dust 15 mg/m ³

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Do not let product enter drains. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

Protective goggles, gloves



Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state

: Liquid

Color

: Colorless

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: Not available

Boiling point

: Not available

Flash Point

: Not available

Burning time

: Not applicable

Burning rate

: Not applicable

Evaporation rate

: Not available

Flammability (solid, gas)

: Not available

Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data.
Incompatible Materials	Strong oxidizers, acids, metals, water. (Note: Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of HIGHLY EXPLOSIVE compounds of lead azide and copper azide.)
Hazardous Decomposition Products	No specific data.

SECTION 11: Toxicological information**Information on toxicological effects****Acute toxicity**

Product/ingredient	Result	Species	Dose	Exposure
Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Glycerol	LD50 Oral	Rat	12,600 mg/kg	-

Conclusion/Summary: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation: No data available

Serious eye damage/irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Azide	Equivocal - Oral - TD	Rat	5460 mg/kg	78 weeks Continuous
	Equivocal - Oral - TDLo	Rat	2730 mg/kg	78 weeks Continuous

Reproductive toxicity: Not available

Teratogenicity: Not available

Specific target organ toxicity (single exposure): Not available

Specific target organ toxicity (repeated exposure): Not available

Aspiration hazard: Not available

Rev. 30-Apr-15

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Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation, skin or eye contact

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional Information

RTECS: VY8050000

RTECS: MA8050000

SECTION 12: Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 ug/L Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 ug/L Marine water	Algae - Macrocystis pyrifera	96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil

Soil/water partition coefficient (KOC) Not available

Rev. 30-Apr-15

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Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within user's premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

U.S. Federal regulations

TSCA: All components are listed or exempted.
Clean Water Act (CWA) 311: disodium
hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed
Clean Air Act Section 602 Class I Substances Not listed
Clean Air Act Section 602 Class II Substances Not listed
DEA List I Chemicals (Precursor Chemicals) Not listed
DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sodium Azide	0 - 0.1	Yes	500	-	1000	-

SARA 304 RQ 1000000 lbs / 454000 kg

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium Azide	0 - 0.1	No	No	Yes	Yes	No

State regulations

New Jersey

Sodium Azide 26628-22-8

Glycerol 56-81-5

New York

Sodium Azide 26628-22-8

Massachusetts

Sodium Azide 26628-22-8

Pennsylvania

Sodium Azide 26628-22-8

Glycerol 56-81-5

California

Sodium Azide 26628-22-8

Louisiana

Sodium Azide 26628-22-8

Michigan

Sodium Azide 26628-22-8

Minnesota

Sodium Azide 26628-22-8

Glycerol 56-81-5

Rhode Island

Sodium Azide 26628-22-8

Glycerol 56-81-5

Canada inventory All components are listed or exempted.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

Malaysia Inventory (EHS Register): All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed

Chemical Weapons Convention List Schedule II Chemicals Not listed

Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30Apr15

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H303	May be harmful if swallowed
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands, forearms, and exposed areas thoroughly after handling.

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P270	Do not eat, drink, or smoke when using this product.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents and container in accordance with all local, regional, national, and international regulations.

NFPA health hazard : 1 - May be irritating
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water

HMIS III Rating

Health : 1 - Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard



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SDS US (GHS HazCom) - US Only



SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse IgG ₁ , Human ads-AP
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Acute Toxicity Oral - Category 5

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) None

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H303 – May be harmful if swallowed
Precautionary statements (GHS-US)	P262 – Do not get in eyes, on skin, or on clothing.
Prevention	P264 – Wash hands, forearms, and exposed areas thoroughly after handling. P270 – Do not eat, drink, or smoke when using this product.
Response	P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
Storage	Not applicable
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other hazards	Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or plumbing copper. Sodium azide is rapidly absorbed through skin.

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Glycerol	(CAS No.) 56-81-5 / [EINECS(EC#)] 200-289-5	50%
Sodium Azide	(CAS No.) 26628-22-8 / [EINECS(EC#)] 247-852-1	0.1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures

Description of first aid measures

First-aid measures general

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician.

Most important symptoms and effects, acute and delayed

Potential acute health effects

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards

Ingestion May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact No specific data

Inhalation No specific data

Skin contact No specific data

Ingestion No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments No specific treatment.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing media**

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Carbon oxides, nitrogen oxides (NO_x)

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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Methods and material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

Control parameters

Sodium Azide (26628-22-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	Absorbed through skin. Notes NaN ₃ CEIL: 0.3 mg/m ³ , (NaN ₃)
USA NIOSH	NIOSH REL (TWA) (ppm)	Absorbed through skin. Notes As HN ₃ CEIL: 0.1 ppm, (as HN ₃)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Absorbed through skin. Notes as NaN ₃ CEIL: 0.3 mg/m ³ , (as NaN ₃)
USA OSHA	OSHA PEL (TWA) (ppm)	Absorbed through skin. Notes as HN ₃ CEIL: 0.1 ppm, (as HN ₃)
Glycerol (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Respirable Fraction 5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Total Dust 15 mg/m ³

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Do not let product enter drains. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

Protective goggles, gloves

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance**Physical state**

: Liquid

Color

: Colorless

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: Not available

Boiling point

: Not available

Flash Point

: Not available

Burning time

: Not applicable

Burning rate

: Not applicable

Evaporation rate

: Not available

Flammability (solid, gas)

: Not available

Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data.
Incompatible Materials	Strong oxidizers, acids, metals, water. (Note: Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of HIGHLY EXPLOSIVE compounds of lead azide and copper azide.)
Hazardous Decomposition Products	No specific data.

SECTION 11: Toxicological information**Information on toxicological effects****Acute toxicity**

Product/ingredient	Result	Species	Dose	Exposure
Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Glycerol	LD50 Oral	Rat	12,600 mg/kg	-

Conclusion/Summary: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Azide	Equivocal - Oral - TD	Rat	5460 mg/kg	78 weeks Continuous
	Equivocal - Oral - TDLo	Rat	2730 mg/kg	78 weeks Continuous

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity (single exposure):	Not available
Specific target organ toxicity (repeated exposure):	Not available
Aspiration hazard:	Not available

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Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation, skin or eye contact

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional Information

RTECS: VY8050000

RTECS: MA8050000

SECTION 12: Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 ug/L Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 ug/L Marine water	Algae - Macrocystis pyrifera	96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil

Soil/water partition coefficient (KOC) Not available

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Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within user's premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information**U.S. Federal regulations**

TSCA: All components are listed or exempted.
Clean Water Act (CWA) 311: disodium
hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed
Clean Air Act Section 602 Class I Substances Not listed
Clean Air Act Section 602 Class II Substances Not listed
DEA List I Chemicals (Precursor Chemicals) Not listed
DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304**Composition/information on ingredients**

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sodium Azide	0 - 0.1	Yes	500	-	1000	-

SARA 304 RQ 1000000 lbs / 454000 kg

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium Azide	0 - 0.1	No	No	Yes	Yes	No

State regulations

New Jersey

Sodium Azide 26628-22-8
Glycerol 56-81-5

New York

Sodium Azide 26628-22-8

Massachusetts

Sodium Azide 26628-22-8

Pennsylvania

Sodium Azide 26628-22-8
Glycerol 56-81-5

California

Sodium Azide 26628-22-8

Louisiana

Sodium Azide 26628-22-8

Michigan

Sodium Azide 26628-22-8

Minnesota

Sodium Azide 26628-22-8
Glycerol 56-81-5

Rhode Island

Sodium Azide 26628-22-8
Glycerol 56-81-5

Canada inventory All components are listed or exempted.

International regulations

International lists

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed
Chemical Weapons Convention List Schedule II Chemicals Not listed
Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30Apr15
Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H303	May be harmful if swallowed
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands, forearms, and exposed areas thoroughly after handling.

Rev. 30-Apr-15

P270	Do not eat, drink, or smoke when using this product.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents and container in accordance with all local, regional, national, and international regulations.

NFPA health hazard : 1 - May be irritating
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water



HMIS III Rating

Health : 1 - Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard

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SDS US (GHS HazCom) - US Only

SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse IgG _{2a} , Human ads-AP
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Acute Toxicity Oral - Category 5

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) None

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H303 – May be harmful if swallowed
Precautionary statements (GHS-US)	P262 – Do not get in eyes, on skin, or on clothing.
Prevention	P264 – Wash hands, forearms, and exposed areas thoroughly after handling. P270 – Do not eat, drink, or smoke when using this product.
Response	P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
Storage	Not applicable
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other hazards	Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or plumbing copper. Sodium azide is rapidly absorbed through skin.

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Glycerol	(CAS No.) 56-81-5 / [EINECS(EC#)] 200-289-5	50%
Sodium Azide	(CAS No.) 26628-22-8 / [EINECS(EC#)] 247-852-1	0.1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures**Description of first aid measures****First-aid measures general**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician.

Most important symptoms and effects, acute and delayed**Potential acute health effects**

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards

Ingestion May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact	No specific data
Inhalation	No specific data
Skin contact	No specific data
Ingestion	No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing media**

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Carbon oxides, nitrogen oxides (NO_x)

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Rev. 30-Apr-15

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Methods and material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

Control parameters

Sodium Azide (26628-22-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	Absorbed through skin. Notes NaN ₃ CEIL: 0.3 mg/m ³ , (NaN ₃)
USA NIOSH	NIOSH REL (TWA) (ppm)	Absorbed through skin. Notes As HN ₃ CEIL: 0.1 ppm, (as HN ₃)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Absorbed through skin. Notes as NaN ₃ CEIL: 0.3 mg/m ³ , (as NaN ₃)
USA OSHA	OSHA PEL (TWA) (ppm)	Absorbed through skin. Notes as HN ₃ CEIL: 0.1 ppm, (as HN ₃)
Glycerol (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Respirable Fraction 5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Total Dust 15 mg/m ³

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Do not let product enter drains. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

Protective goggles, gloves



Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state

: Liquid

Color

: Colorless

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: Not available

Boiling point

: Not available

Flash Point

: Not available

Burning time

: Not applicable

Burning rate

: Not applicable

Evaporation rate

: Not available

Flammability (solid, gas)

: Not available

Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data.
Incompatible Materials	Strong oxidizers, acids, metals, water. (Note: Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of HIGHLY EXPLOSIVE compounds of lead azide and copper azide.)
Hazardous Decomposition Products	No specific data.

SECTION 11: Toxicological information**Information on toxicological effects**

Acute toxicity

Product/ingredient	Result	Species	Dose	Exposure
Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Glycerol	LD50 Oral	Rat	12,600 mg/kg	-

Conclusion/Summary: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Azide	Equivocal - Oral - TD	Rat	5460 mg/kg	78 weeks Continuous
	Equivocal - Oral - TDLo	Rat	2730 mg/kg	78 weeks Continuous

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity (single exposure):	Not available
Specific target organ toxicity (repeated exposure):	Not available
Aspiration hazard:	Not available

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Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation, skin or eye contact

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional Information

RTECS: VY8050000

RTECS: MA8050000

SECTION 12: Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 ug/L Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 ug/L Marine water	Algae - Macrocystis pyrifera	96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil

Soil/water partition coefficient (KOC) Not available

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Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within user's premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

U.S. Federal regulations

TSCA: All components are listed or exempted.
Clean Water Act (CWA) 311: disodium
hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed
Clean Air Act Section 602 Class I Substances Not listed
Clean Air Act Section 602 Class II Substances Not listed
DEA List I Chemicals (Precursor Chemicals) Not listed
DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sodium Azide	0 - 0.1	Yes	500	-	1000	-

SARA 304 RQ 1000000 lbs / 454000 kg

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium Azide	0 - 0.1	No	No	Yes	Yes	No

State regulations

New Jersey

Sodium Azide 26628-22-8

Glycerol 56-81-5

New York

Sodium Azide 26628-22-8

Massachusetts

Sodium Azide 26628-22-8

Pennsylvania

Sodium Azide 26628-22-8

Glycerol 56-81-5

California

Sodium Azide 26628-22-8

Louisiana

Sodium Azide 26628-22-8

Michigan

Sodium Azide 26628-22-8

Minnesota

Sodium Azide 26628-22-8

Glycerol 56-81-5

Rhode Island

Sodium Azide 26628-22-8

Glycerol 56-81-5

Canada inventory All components are listed or exempted.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

Malaysia Inventory (EHS Register): All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed

Chemical Weapons Convention List Schedule II Chemicals Not listed

Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30Apr15

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H303	May be harmful if swallowed
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands, forearms, and exposed areas thoroughly after handling.

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P270	Do not eat, drink, or smoke when using this product.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents and container in accordance with all local, regional, national, and international regulations.

NFPA health hazard : 1 - May be irritating
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water



HMIS III Rating

Health : 1 - Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard

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SDS US (GHS HazCom) - US Only



SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse IgG _{2b} , Human ads-AP
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Acute Toxicity Oral - Category 5

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) None

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H303 – May be harmful if swallowed
Precautionary statements (GHS-US)	P262 – Do not get in eyes, on skin, or on clothing.
Prevention	P264 – Wash hands, forearms, and exposed areas thoroughly after handling. P270 – Do not eat, drink, or smoke when using this product.
Response	P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
Storage	Not applicable
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other hazards	Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or plumbing copper. Sodium azide is rapidly absorbed through skin.

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Glycerol	(CAS No.) 56-81-5 / [EINECS(EC#)] 200-289-5	50%
Sodium Azide	(CAS No.) 26628-22-8 / [EINECS(EC#)] 247-852-1	0.1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures**Description of first aid measures****First-aid measures general**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician.

Most important symptoms and effects, acute and delayed**Potential acute health effects**

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards

Ingestion May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact	No specific data
Inhalation	No specific data
Skin contact	No specific data
Ingestion	No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing media**

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Carbon oxides, nitrogen oxides (NO_x)

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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Methods and material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

Control parameters

Sodium Azide (26628-22-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	Absorbed through skin. Notes NaN ₃ CEIL: 0.3 mg/m ³ , (NaN ₃)
USA NIOSH	NIOSH REL (TWA) (ppm)	Absorbed through skin. Notes As HN ₃ CEIL: 0.1 ppm, (as HN ₃)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Absorbed through skin. Notes as NaN ₃ CEIL: 0.3 mg/m ³ , (as NaN ₃)
USA OSHA	OSHA PEL (TWA) (ppm)	Absorbed through skin. Notes as HN ₃ CEIL: 0.1 ppm, (as HN ₃)
Glycerol (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Respirable Fraction 5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Total Dust 15 mg/m ³

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Do not let product enter drains. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

Protective goggles, gloves



Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state

: Liquid

Color

: Colorless

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: Not available

Boiling point

: Not available

Flash Point

: Not available

Burning time

: Not applicable

Burning rate

: Not applicable

Evaporation rate

: Not available

Flammability (solid, gas)

: Not available

Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data.
Incompatible Materials	Strong oxidizers, acids, metals, water. (Note: Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of HIGHLY EXPLOSIVE compounds of lead azide and copper azide.)
Hazardous Decomposition Products	No specific data.

SECTION 11: Toxicological information**Information on toxicological effects**

Acute toxicity

Product/ingredient	Result	Species	Dose	Exposure
Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Glycerol	LD50 Oral	Rat	12,600 mg/kg	-

Conclusion/Summary: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Azide	Equivocal - Oral - TD	Rat	5460 mg/kg	78 weeks Continuous
	Equivocal - Oral - TDLo	Rat	2730 mg/kg	78 weeks Continuous

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity (single exposure):	Not available
Specific target organ toxicity (repeated exposure):	Not available
Aspiration hazard:	Not available

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Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation, skin or eye contact

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional Information

RTECS: VY8050000

RTECS: MA8050000

SECTION 12: Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 ug/L Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 ug/L Marine water	Algae - Macrocystis pyrifera	96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil

Soil/water partition coefficient (KOC) Not available

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Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within user's premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information**U.S. Federal regulations**

TSCA: All components are listed or exempted.
Clean Water Act (CWA) 311: disodium
hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed
Clean Air Act Section 602 Class I Substances Not listed
Clean Air Act Section 602 Class II Substances Not listed
DEA List I Chemicals (Precursor Chemicals) Not listed
DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304**Composition/information on ingredients**

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sodium Azide	0 - 0.1	Yes	500	-	1000	-

SARA 304 RQ 1000000 lbs / 454000 kg

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium Azide	0 - 0.1	No	No	Yes	Yes	No

State regulations

New Jersey

Sodium Azide 26628-22-8

Glycerol 56-81-5

New York

Sodium Azide 26628-22-8

Massachusetts

Sodium Azide 26628-22-8

Pennsylvania

Sodium Azide 26628-22-8

Glycerol 56-81-5

California

Sodium Azide 26628-22-8

Louisiana

Sodium Azide 26628-22-8

Michigan

Sodium Azide 26628-22-8

Minnesota

Sodium Azide 26628-22-8

Glycerol 56-81-5

Rhode Island

Sodium Azide 26628-22-8

Glycerol 56-81-5

Canada inventory All components are listed or exempted.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

Malaysia Inventory (EHS Register): All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed

Chemical Weapons Convention List Schedule II Chemicals Not listed

Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30Apr15

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H303	May be harmful if swallowed
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands, forearms, and exposed areas thoroughly after handling.

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P270	Do not eat, drink, or smoke when using this product.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents and container in accordance with all local, regional, national, and international regulations.

NFPA health hazard : 1 - May be irritating
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water



HMIS III Rating

Health : 1 - Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard

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SDS US (GHS HazCom) - US Only



SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse IgG ₃ , Human ads-AP
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Acute Toxicity Oral - Category 5

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) None

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H303 – May be harmful if swallowed
Precautionary statements (GHS-US)	P262 – Do not get in eyes, on skin, or on clothing.
Prevention	P264 – Wash hands, forearms, and exposed areas thoroughly after handling. P270 – Do not eat, drink, or smoke when using this product.
Response	P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
Storage	Not applicable
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other hazards	Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or plumbing copper. Sodium azide is rapidly absorbed through skin.

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Glycerol	(CAS No.) 56-81-5 / [EINECS(EC#)] 200-289-5	50%
Sodium Azide	(CAS No.) 26628-22-8 / [EINECS(EC#)] 247-852-1	0.1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures**Description of first aid measures****First-aid measures general**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician.

Most important symptoms and effects, acute and delayed**Potential acute health effects**

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards

Ingestion May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact No specific data

Inhalation No specific data

Skin contact No specific data

Ingestion No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments No specific treatment.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing media**

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Carbon oxides, nitrogen oxides (NO_x)

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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Methods and material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

Control parameters

Sodium Azide (26628-22-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	Absorbed through skin. Notes NaN ₃ CEIL: 0.3 mg/m ³ , (NaN ₃)
USA NIOSH	NIOSH REL (TWA) (ppm)	Absorbed through skin. Notes As HN ₃ CEIL: 0.1 ppm, (as HN ₃)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Absorbed through skin. Notes as NaN ₃ CEIL: 0.3 mg/m ³ , (as NaN ₃)
USA OSHA	OSHA PEL (TWA) (ppm)	Absorbed through skin. Notes as HN ₃ CEIL: 0.1 ppm, (as HN ₃)
Glycerol (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Respirable Fraction 5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Total Dust 15 mg/m ³

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Do not let product enter drains. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

Protective goggles, gloves



Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state

: Liquid

Color

: Colorless

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: Not available

Boiling point

: Not available

Flash Point

: Not available

Burning time

: Not applicable

Burning rate

: Not applicable

Evaporation rate

: Not available

Flammability (solid, gas)

: Not available

Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data.
Incompatible Materials	Strong oxidizers, acids, metals, water. (Note: Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of HIGHLY EXPLOSIVE compounds of lead azide and copper azide.)
Hazardous Decomposition Products	No specific data.

SECTION 11: Toxicological information**Information on toxicological effects****Acute toxicity**

Product/ingredient	Result	Species	Dose	Exposure
Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Glycerol	LD50 Oral	Rat	12,600 mg/kg	-

Conclusion/Summary: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Azide	Equivocal - Oral - TD	Rat	5460 mg/kg	78 weeks Continuous
	Equivocal - Oral - TDLo	Rat	2730 mg/kg	78 weeks Continuous

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity (single exposure):	Not available
Specific target organ toxicity (repeated exposure):	Not available
Aspiration hazard:	Not available

Rev. 30-Apr-15

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Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation, skin or eye contact

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional Information

RTECS: VY8050000

RTECS: MA8050000

SECTION 12: Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 ug/L Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 ug/L Marine water	Algae - Macrocystis pyrifera	96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil

Soil/water partition coefficient (KOC) Not available

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Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within user's premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

U.S. Federal regulations

TSCA: All components are listed or exempted.
Clean Water Act (CWA) 311: disodium
hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed
Clean Air Act Section 602 Class I Substances Not listed
Clean Air Act Section 602 Class II Substances Not listed
DEA List I Chemicals (Precursor Chemicals) Not listed
DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sodium Azide	0 - 0.1	Yes	500	-	1000	-

SARA 304 RQ 1000000 lbs / 454000 kg

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium Azide	0 - 0.1	No	No	Yes	Yes	No

State regulations

New Jersey

Sodium Azide 26628-22-8
Glycerol 56-81-5

New York

Sodium Azide 26628-22-8

Massachusetts

Sodium Azide 26628-22-8

Pennsylvania

Sodium Azide 26628-22-8
Glycerol 56-81-5

California

Sodium Azide 26628-22-8

Louisiana

Sodium Azide 26628-22-8

Michigan

Sodium Azide 26628-22-8

Minnesota

Sodium Azide 26628-22-8
Glycerol 56-81-5

Rhode Island

Sodium Azide 26628-22-8
Glycerol 56-81-5

Canada inventory All components are listed or exempted.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

Malaysia Inventory (EHS Register): All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed

Chemical Weapons Convention List Schedule II Chemicals Not listed

Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30Apr15

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H303	May be harmful if swallowed
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands, forearms, and exposed areas thoroughly after handling.

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P270	Do not eat, drink, or smoke when using this product.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents and container in accordance with all local, regional, national, and international regulations.

NFPA health hazard : 1 - May be irritating
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water



HMIS III Rating

Health : 1 - Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard

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SDS US (GHS HazCom) - US Only



SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse IgA-AP
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Acute Toxicity Oral - Category 5

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) None

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H303 – May be harmful if swallowed
Precautionary statements (GHS-US)	P262 – Do not get in eyes, on skin, or on clothing.
Prevention	P264 – Wash hands, forearms, and exposed areas thoroughly after handling. P270 – Do not eat, drink, or smoke when using this product.
Response	P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
Storage	Not applicable
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other hazards	Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or plumbing copper. Sodium azide is rapidly absorbed through skin.

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Glycerol	(CAS No.) 56-81-5 / [EINECS(EC#)] 200-289-5	50%
Sodium Azide	(CAS No.) 26628-22-8 / [EINECS(EC#)] 247-852-1	0.1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures**Description of first aid measures****First-aid measures general**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician.

Most important symptoms and effects, acute and delayed**Potential acute health effects**

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards

Ingestion May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact	No specific data
Inhalation	No specific data
Skin contact	No specific data
Ingestion	No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Carbon oxides, nitrogen oxides (NOx)

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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Methods and material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

Control parameters

Sodium Azide (26628-22-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	Absorbed through skin. Notes NaN ₃ CEIL: 0.3 mg/m ³ , (NaN ₃)
USA NIOSH	NIOSH REL (TWA) (ppm)	Absorbed through skin. Notes As HN ₃ CEIL: 0.1 ppm, (as HN ₃)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Absorbed through skin. Notes as NaN ₃ CEIL: 0.3 mg/m ³ , (as NaN ₃)
USA OSHA	OSHA PEL (TWA) (ppm)	Absorbed through skin. Notes as HN ₃ CEIL: 0.1 ppm, (as HN ₃)
Glycerol (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Respirable Fraction 5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Total Dust 15 mg/m ³

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Do not let product enter drains. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

Protective goggles, gloves

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance**Physical state**

: Liquid

Color

: Colorless

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: Not available

Boiling point

: Not available

Flash Point

: Not available

Burning time

: Not applicable

Burning rate

: Not applicable

Evaporation rate

: Not available

Flammability (solid, gas)

: Not available

Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data.
Incompatible Materials	Strong oxidizers, acids, metals, water. (Note: Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of HIGHLY EXPLOSIVE compounds of lead azide and copper azide.)
Hazardous Decomposition Products	No specific data.

SECTION 11: Toxicological information**Information on toxicological effects****Acute toxicity**

Product/ingredient	Result	Species	Dose	Exposure
Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Glycerol	LD50 Oral	Rat	12,600 mg/kg	-

Conclusion/Summary: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Azide	Equivocal - Oral - TD	Rat	5460 mg/kg	78 weeks Continuous
	Equivocal - Oral - TDLo	Rat	2730 mg/kg	78 weeks Continuous

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity (single exposure):	Not available
Specific target organ toxicity (repeated exposure):	Not available
Aspiration hazard:	Not available

Rev. 30-Apr-15

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Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation, skin or eye contact

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional Information

RTECS: VY8050000

RTECS: MA8050000

SECTION 12: Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 ug/L Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 ug/L Marine water	Algae - Macrocystis pyrifera	96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil

Soil/water partition coefficient (KOC) Not available

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Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within user's premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

U.S. Federal regulations

TSCA: All components are listed or exempted.
Clean Water Act (CWA) 311: disodium
hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed
Clean Air Act Section 602 Class I Substances Not listed
Clean Air Act Section 602 Class II Substances Not listed
DEA List I Chemicals (Precursor Chemicals) Not listed
DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sodium Azide	0 - 0.1	Yes	500	-	1000	-

SARA 304 RQ 1000000 lbs / 454000 kg

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium Azide	0 - 0.1	No	No	Yes	Yes	No

State regulations

New Jersey

Sodium Azide 26628-22-8

Glycerol 56-81-5

New York

Sodium Azide 26628-22-8

Massachusetts

Sodium Azide 26628-22-8

Pennsylvania

Sodium Azide 26628-22-8

Glycerol 56-81-5

California

Sodium Azide 26628-22-8

Louisiana

Sodium Azide 26628-22-8

Michigan

Sodium Azide 26628-22-8

Minnesota

Sodium Azide 26628-22-8

Glycerol 56-81-5

Rhode Island

Sodium Azide 26628-22-8

Glycerol 56-81-5

Canada inventory All components are listed or exempted.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

Malaysia Inventory (EHS Register): All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed

Chemical Weapons Convention List Schedule II Chemicals Not listed

Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30Apr15

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H303	May be harmful if swallowed
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands, forearms, and exposed areas thoroughly after handling.

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P270	Do not eat, drink, or smoke when using this product.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents and container in accordance with all local, regional, national, and international regulations.

NFPA health hazard : 1 - May be irritating
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water



HMIS III Rating

Health : 1 - Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard

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SDS US (GHS HazCom) - US Only

SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse Kappa-AP
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Acute Toxicity Oral - Category 5

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) None

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H303 – May be harmful if swallowed
Precautionary statements (GHS-US)	P262 – Do not get in eyes, on skin, or on clothing.
Prevention	P264 – Wash hands, forearms, and exposed areas thoroughly after handling. P270 – Do not eat, drink, or smoke when using this product.
Response	P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
Storage	Not applicable
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other hazards	Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or plumbing copper. Sodium azide is rapidly absorbed through skin.

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Glycerol	(CAS No.) 56-81-5 / [EINECS(EC#)] 200-289-5	50%
Sodium Azide	(CAS No.) 26628-22-8 / [EINECS(EC#)] 247-852-1	0.1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures

Description of first aid measures

First-aid measures general

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician.

Most important symptoms and effects, acute and delayed

Potential acute health effects

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards

Ingestion May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact	No specific data
Inhalation	No specific data
Skin contact	No specific data
Ingestion	No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures

Extinguishing media**Suitable extinguishing media**

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Carbon oxides, nitrogen oxides (NOx)

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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Methods and material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

Control parameters

Sodium Azide (26628-22-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	Absorbed through skin. Notes NaN ₃ CEIL: 0.3 mg/m ³ , (NaN ₃)
USA NIOSH	NIOSH REL (TWA) (ppm)	Absorbed through skin. Notes As HN ₃ CEIL: 0.1 ppm, (as HN ₃)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Absorbed through skin. Notes as NaN ₃ CEIL: 0.3 mg/m ³ , (as NaN ₃)
USA OSHA	OSHA PEL (TWA) (ppm)	Absorbed through skin. Notes as HN ₃ CEIL: 0.1 ppm, (as HN ₃)
Glycerol (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Respirable Fraction 5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Total Dust 15 mg/m ³

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Do not let product enter drains. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

Protective goggles, gloves



Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state

: Liquid

Color

: Colorless

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: Not available

Boiling point

: Not available

Flash Point

: Not available

Burning time

: Not applicable

Burning rate

: Not applicable

Evaporation rate

: Not available

Flammability (solid, gas)

: Not available

Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data.
Incompatible Materials	Strong oxidizers, acids, metals, water. (Note: Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of HIGHLY EXPLOSIVE compounds of lead azide and copper azide.)
Hazardous Decomposition Products	No specific data.

SECTION 11: Toxicological information**Information on toxicological effects****Acute toxicity**

Product/ingredient	Result	Species	Dose	Exposure
Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Glycerol	LD50 Oral	Rat	12,600 mg/kg	-

Conclusion/Summary: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Azide	Equivocal - Oral - TD	Rat	5460 mg/kg	78 weeks Continuous
	Equivocal - Oral - TDLo	Rat	2730 mg/kg	78 weeks Continuous

Reproductive toxicity:	Not available
Teratogenicity:	Not available
Specific target organ toxicity (single exposure):	Not available
Specific target organ toxicity (repeated exposure):	Not available
Aspiration hazard:	Not available

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Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation, skin or eye contact

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional Information

RTECS: VY8050000

RTECS: MA8050000

SECTION 12: Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 ug/L Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 ug/L Marine water	Algae - Macrocystis pyrifera	96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil

Soil/water partition coefficient (KOC) Not available

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Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within user's premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

U.S. Federal regulations

TSCA: All components are listed or exempted.
Clean Water Act (CWA) 311: disodium
hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed
Clean Air Act Section 602 Class I Substances Not listed
Clean Air Act Section 602 Class II Substances Not listed
DEA List I Chemicals (Precursor Chemicals) Not listed
DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sodium Azide	0 - 0.1	Yes	500	-	1000	-

SARA 304 RQ 1000000 lbs / 454000 kg

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium Azide	0 - 0.1	No	No	Yes	Yes	No

State regulations

New Jersey

Sodium Azide 26628-22-8
Glycerol 56-81-5

New York

Sodium Azide 26628-22-8

Massachusetts

Sodium Azide 26628-22-8

Pennsylvania

Sodium Azide 26628-22-8
Glycerol 56-81-5

California

Sodium Azide 26628-22-8

Louisiana

Sodium Azide 26628-22-8

Michigan

Sodium Azide 26628-22-8

Minnesota

Sodium Azide 26628-22-8
Glycerol 56-81-5

Rhode Island

Sodium Azide 26628-22-8
Glycerol 56-81-5

Canada inventory All components are listed or exempted.

International regulations

International lists

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed
Chemical Weapons Convention List Schedule II Chemicals Not listed
Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30Apr15
Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H303	May be harmful if swallowed
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands, forearms, and exposed areas thoroughly after handling.

Rev. 30-Apr-15

P270	Do not eat, drink, or smoke when using this product.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents and container in accordance with all local, regional, national, and international regulations.

NFPA health hazard : 1 - May be irritating
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water



HMIS III Rating

Health : 1 - Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard

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SDS US (GHS HazCom) - US Only



SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	Goat Anti-Mouse Lambda-AP
Other means of identification	SBA Clonotyping System-AP
Product type	Liquid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Acute Toxicity Oral - Category 5

Label elements

GHS-US labeling

Hazard pictograms (GHS-US) None

Signal word (GHS-US)	Warning
Hazard statements (GHS-US)	H303 – May be harmful if swallowed
Precautionary statements (GHS-US)	P262 – Do not get in eyes, on skin, or on clothing.
Prevention	P264 – Wash hands, forearms, and exposed areas thoroughly after handling. P270 – Do not eat, drink, or smoke when using this product.
Response	P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
Storage	Not applicable
Disposal	P501 – Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Other hazards	Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or plumbing copper. Sodium azide is rapidly absorbed through skin.

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Mixture
Other Means of Identification	Not available
<u>CAS Number/other identifiers</u>	
CAS Number	Not applicable

Ingredient Name	Product Identifier	Percentage
Glycerol	(CAS No.) 56-81-5 / [EINECS(EC#)] 200-289-5	50%
Sodium Azide	(CAS No.) 26628-22-8 / [EINECS(EC#)] 247-852-1	0.1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures**Description of first aid measures****First-aid measures general**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

First-aid measures after inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after skin contact

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

First-aid measures after ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician.

Most important symptoms and effects, acute and delayed**Potential acute health effects**

Eye contact	No known significant effects or critical hazards
Inhalation	No known significant effects or critical hazards
Skin contact	No known significant effects or critical hazards

Ingestion May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact	No specific data
Inhalation	No specific data
Skin contact	No specific data
Ingestion	No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing media**

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Carbon oxides, nitrogen oxides (NOx)

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

General measures: This product contains a material of biological origin. Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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Methods and material for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: Exposure controls/personal protection

Control parameters

Sodium Azide (26628-22-8)		
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	Absorbed through skin. Notes NaN ₃ CEIL: 0.3 mg/m ³ , (NaN ₃)
USA NIOSH	NIOSH REL (TWA) (ppm)	Absorbed through skin. Notes As HN ₃ CEIL: 0.1 ppm, (as HN ₃)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Absorbed through skin. Notes as NaN ₃ CEIL: 0.3 mg/m ³ , (as NaN ₃)
USA OSHA	OSHA PEL (TWA) (ppm)	Absorbed through skin. Notes as HN ₃ CEIL: 0.1 ppm, (as HN ₃)
Glycerol (56-81-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Respirable Fraction 5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	Total Dust 15 mg/m ³

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

Do not let product enter drains. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

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environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment

Protective goggles, gloves

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Impervious clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Other information

When using, do not eat, drink, or smoke. May contain material of animal origin.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance**Physical state**

: Liquid

Color

: Colorless

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: Not available

Boiling point

: Not available

Flash Point

: Not available

Burning time

: Not applicable

Burning rate

: Not applicable

Evaporation rate

: Not available

Flammability (solid, gas)

: Not available

Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available

Other information

No additional information available

SECTION 10: Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability	The product is stable.
Possibility Of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions To Avoid	No specific data.
Incompatible Materials	Strong oxidizers, acids, metals, water. (Note: Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of HIGHLY EXPLOSIVE compounds of lead azide and copper azide.)
Hazardous Decomposition Products	No specific data.

SECTION 11: Toxicological information**Information on toxicological effects****Acute toxicity**

Product/ingredient	Result	Species	Dose	Exposure
Sodium Azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-
Glycerol	LD50 Oral	Rat	12,600 mg/kg	-

Conclusion/Summary: To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation: No data available

Serious eye damage/irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity:

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Azide	Equivocal - Oral - TD	Rat	5460 mg/kg	78 weeks Continuous
	Equivocal - Oral - TDLo	Rat	2730 mg/kg	78 weeks Continuous

Reproductive toxicity: Not available

Teratogenicity: Not available

Specific target organ toxicity (single exposure): Not available

Specific target organ toxicity (repeated exposure): Not available

Aspiration hazard: Not available

Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation, skin or eye contact

Potential acute health effects

Eye contact: No known significant effects or critical hazards

Inhalation: No known significant effects or critical hazards

Skin contact: No known significant effects or critical hazards

Ingestion: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: No specific data

Inhalation: No specific data

Skin contact: No specific data

Ingestion: No specific data

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Long term exposure

Potential immediate effects: Not available

Potential delayed effects: Not available

Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional Information

RTECS: VY8050000

RTECS: MA8050000

SECTION 12: Ecological information

Toxicity

Product / ingredient name	Result	Species	Exposure
Sodium Azide	Acute EC50 0.348 mg/L Fresh water	Algae – Pseudokirchneriella subcapitata	96 hours
	Acute EC50 4.2 to 6.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 9000 ug/L Fresh water	Crustaceans - Gammarus lacustris	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 5600 ug/L Marine water	Algae - Macrocystis pyrifera	96 hours

Persistence and degradability Not available

Bioaccumulative potential Not available

Mobility in soil

Soil/water partition coefficient (KOC) Not available

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Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**Disposal methods**

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within user's premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

U.S. Federal regulations

TSCA: All components are listed or exempted.
Clean Water Act (CWA) 311: disodium
hydrogenorthophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed
Clean Air Act Section 602 Class I Substances Not listed
Clean Air Act Section 602 Class II Substances Not listed
DEA List I Chemicals (Precursor Chemicals) Not listed
DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Sodium Azide	0 - 0.1	Yes	500	-	1000	-

SARA 304 RQ 1000000 lbs / 454000 kg

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Sodium Azide	0 - 0.1	No	No	Yes	Yes	No

State regulations

New Jersey

Sodium Azide 26628-22-8

Glycerol 56-81-5

New York

Sodium Azide 26628-22-8

Massachusetts

Sodium Azide 26628-22-8

Pennsylvania

Sodium Azide 26628-22-8

Glycerol 56-81-5

California

Sodium Azide 26628-22-8

Louisiana

Sodium Azide 26628-22-8

Michigan

Sodium Azide 26628-22-8

Minnesota

Sodium Azide 26628-22-8

Glycerol 56-81-5

Rhode Island

Sodium Azide 26628-22-8

Glycerol 56-81-5

Canada inventory All components are listed or exempted.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

Malaysia Inventory (EHS Register): All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Taiwan inventory (CSNN): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Not listed

Chemical Weapons Convention List Schedule II Chemicals Not listed

Chemical Weapons Convention List Schedule III Chemicals Not listed

SECTION 16: Other information

Indication of changes : 30Apr15

Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

H303	May be harmful if swallowed
P262	Do not get in eyes, on skin, or on clothing
P264	Wash hands, forearms, and exposed areas thoroughly after handling.

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P270	Do not eat, drink, or smoke when using this product.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents and container in accordance with all local, regional, national, and international regulations.

NFPA health hazard : 1 - May be irritating
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water



HMIS III Rating

Health : 1 - Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard

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SDS US (GHS HazCom) - US Only

SECTION 1: Identification of the substance or mixture and of the supplier

GHS Product Identifier	pNPP Substrate, Tablet
Other means of identification	SBA Clonotyping System-AP
Product type	Solid
Product code	5300-04
Chemical formula	Not applicable
CAS No	Not applicable
SDS No.	2230675
Relevant Identified uses of the substance or mixture and uses advised against	Not applicable
Supplier's details	Southern Biotechnology Associates, Inc. 160 Oxmoor Boulevard Birmingham, Alabama 35209 USA Tel: (205) 945-1774 Fax: (205) 945-8768 Website: www.southernbiotech.com
Distributor and Emergency Phone No.	Refer to website for distributor and emergency phone numbers. Tel: (205) 945-1774

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification

Not a hazardous substance or mixture

Label elements

GHS-US labeling

Hazard pictograms (GHS-US)

Not a hazardous substance or mixture

Other hazards none

Unknown acute toxicity (GHS US) No data available

Full text of H-phrases: see section 16

SECTION 3: Composition/information on ingredients

Substance/Mixture	Substance
Other Means of Identification	4-Nitrophenyl phosphatedisodium salthexahydrate pNPP disodium salthexahydrate Formula: $C_6H_4NNa_2O_6P \cdot 6H_2O$

CAS Number/other identifiers

CAS Number 333338-18-4

Ingredient Name	Product Identifier	Percentage
4-Nitrophenyl phosphatedisodium salthexahydrate pNPP disodium	(CAS No.) 333338-18-4 / [EINECS(EC#)] 224-246-5	100%

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8

SECTION 4: First aid measures

Description of first aid measures

First-aid measures general

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

First-aid measures after eye contact

Flush eyes with water as a precaution.

First-aid measures after inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

First-aid measures after skin contact

Wash off with soap and plenty of water.

First-aid measures after ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water.

Most important symptoms and effects, acute and delayed

Potential acute health effects

Eye contact

No known significant effects or critical hazards

Inhalation

No known significant effects or critical hazards

Skin contact

No known significant effects or critical hazards

Ingestion

Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact

No specific data

Inhalation

No specific data

Skin contact

No specific data

Ingestion

No specific data

Indication of any immediate medical attention and special treatment needed, if necessary

Notes to physician

No data available

Specific treatments

No data available

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

None known

Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx), Oxides of phosphorus, Sodium oxides

Hazardous thermal decomposition products

No specific data

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

Rev. 30-Apr-15

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SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures: Use universal precautions during clean up procedures. Avoid breathing (vapor, mist). Use only in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment, see section 8.

For non-emergency personnel

Avoid dust formation. Avoid breathing vapors, mist or gas.

For emergency responders

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and material for containment and cleaning up

Small spill: Sweep up and shovel. Keep in suitable, closed containers for disposal.

Large spill: Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

See Section 1 for emergency contact information, Section 13 for waste disposal, and Section 8 for exposure controls and personal protection.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling: Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

Hygiene measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Technical measures: Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: -20°C

Light sensitive.

SECTION 8: Exposure controls/personal protection

Control parameters

Exposure controls

Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Environmental exposure controls

Do not let product enter drains.

Personal protective equipment

Protective goggles, gloves



Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this

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product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method:

EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Conditions to avoid

No specific data

Incompatible materials

No specific data

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.
When using, do not eat, drink, or smoke.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state

: Form: solid

Color

: white, light yellow

Odor

: Not available

Odor threshold

: Not available

pH

: Not available

Melting point

: > 300 °C (> 572 °F)

Boiling point

: Not available

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Flash Point	: Not available
Burning time	: Not applicable
Burning rate	: Not applicable
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Lower and upper explosive (flammable) limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: Not available
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
SADT	: Not available
Viscosity	: Not available
Other information	
No additional information available	

SECTION 10: Stability and reactivity

Reactivity	No data available
Chemical Stability	The product is stable under recommended storage conditions.
Possibility Of Hazardous Reactions	No data available
Conditions To Avoid	Exposure to light may affect product quality.
Incompatible Materials	Strong oxidizing agents, Strong acids, Strong bases
Hazardous Decomposition Products	Other decomposition products - no data available In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity	No data available
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Conclusion/Summary:	To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.
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Skin corrosion/irritation:	No data available
Serious eye damage/irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available

Carcinogenicity:

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity:	No data available
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Rev. 30-Apr-15

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Teratogenicity: No data available
Specific target organ toxicity (single exposure): No data available
Specific target organ toxicity (repeated exposure): No data available
Aspiration hazard: No data available
Additional Information: RTECS: Not available.

SECTION 12: Ecological information

Toxicity No data available
Persistence and degradability No data available
Bioaccumulative potential No data available
Mobility in soil No data available
Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects No data available

SECTION 13: Disposal considerations

Waste treatment methods

Product Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging Dispose of as unused product.

SECTION 14: Transport information

	DOT Classification	IATA
UN number	Not regulated	Not regulated
UN proper	-	-
Transport hazard class(es)	-	-
Packing group	-	-
Environmental hazards	No	No
Additional information	-	-

Special precautions for user: Transport within users premises always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

SARA 302/304

Composition/information on ingredients

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

State regulations

Pennsylvania

Disodium 4-nitrophenyl phosphate hexahydrate 333338-18-4

New Jersey

Disodium 4-nitrophenyl phosphate hexahydrate 333338-18-4

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canada inventory

All components are listed or exempted.

SECTION 16: Other information

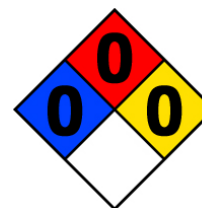
Indication of changes : 30-Apr-15
Other information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

NFPA health : 0 - No unusual hazard
NFPA fire hazard : 0 - Not combustible
NFPA reactivity : 0 - Not reactive when mixed with water

HMIS III Rating

Health : 0- Minimal Hazard
Flammability : 0 - Minimal Hazard
Physical : 0 - Minimal Hazard



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