

SAFETY DATA SHEETS

This SDS packet was issued with item:

073650686

N/A

DENTSPLY International

DENTSPLY PROSTHETICS

Safety Data Sheet

Safety Data Sheet (in compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010)

Date Issued: 13 February 2002

Document Number: 333

Date Revised: 09 August 2013

Revision Number: 7

1. PRODUCT IDENTIFICATION

Trade Name (as labeled): Austenal ®Protective Coat Liquid

Product Identifier (Part/Item Number): N025835

U.N. Number: None

U.N. Dangerous Goods Classification: None

Recommended Use: Refractory Model Sealant

Restrictions on Use: For Professional Use Only

Manufacturer/Supplier Name: Dentsply Prosthetics

Manufacturer/Supplier Address: 570 West College Ave.
York, PA 17405-0872

Manufacturer/Supplier Telephone Number: 717-845-7511 (Product Information)

Emergency Contact Telephone Number: 800-424-9300 Chemtrec

Email address: Prosthetics_MSDS@Dentsply.com

2. HAZARD(s) IDENTIFICATION

EU Classification (1999/45/EC): Not classified as Dangerous

Refer to Section 16 for the full text of the EU Classifications and R Phrases.

Labeling in accordance with 1999/45/EC: None required

US Hazard Classification: Not Hazardous

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Components	C.A.S. #	EINECS #	Substance Classification	WT %
Glycerin	56-81-5	200-289-5	Not Applicable	10-30
Sodium Silicate	1344-09-8	215-687-4	Xi R36/38 Eye Irrit. 2A, H319 Skin Irrit. 2, H315	10-20

Sodium 2-ethylhexyl sulfate	126-92-1	204-812-8	Xi R41 Eye Dam. 1, H318	<2
Ammonium Hydroxide	1336-21-6	215-647-6	C, N R34, R50 Skin Corr. 1B, H314 Aquatic Acute 1, H400	<1





The exact concentration is being withheld as a trade secret.

Refer to Section 16 for the full text of the GHS and H phrases and EU Classifications and R Phrases.

4. FIRST-AID MEASURES

Routes of Exposure	First Aid Instructions
Eye	Flush victim's eyes with large quantities of water for at least 15 minutes, while holding the eyelids apart. Get immediate medical attention.
Skin	Flush skin with plenty of water for 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops. Launder clothing before re-use. (Discard contaminated shoes).
Inhalation	Remove victim to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get immediate medical attention.
Ingestion	Do not induce vomiting. If conscious, give 8 ounces of water to dilute. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.
Most important symptoms of exposure	May cause eye and skin irritation. Inhalation of vapors or mist may cause mucous membrane and respiratory irritation. May be harmful if swallowed.
Note to Physicians (Treatment, Testing, and Monitoring): Treat symptomatically. Immediate medical attention is required for eye contact, inhalation and ingestion.	

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Use media appropriate for surrounding fire.		
Fire Fighting Procedures:	Cool exposed intact containers with water spray.		
Specific Hazards Arising from the Chemical:	Reacts with most metals to form flammable hydrogen gas. Decomposition may release oxides of carbon, nitrogen and ammonia.		
Precautions for Fire Fighters:	Firefighters should wear full emergency equipment and approved positive pressure self-contained breathing apparatus.		
Recommended Protective Equipment for Fire Fighters:			
EYES/FACE	HANDS	RESPIRATORY	THERMAL
			



6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, PPE and Emergency Procedures: Evacuate spill area and keep unprotected personnel away. Ventilate area. Wear appropriate protective clothing as described in Section 8. Avoid contact with skin, eyes or clothing.

Environmental Precautions: Prevent entry into sewers and waterways. Consult local authorities regarding requirements.

Methods and Materials for Containment and Clean-up: Contain and collect using an inert absorbent material and place in appropriate containers for disposal. Rinse spill area with water.

Recommended Personal Protective Equipment for Containment and Clean-up:

EYES/FACE	HANDS	RESPIRATORY	SKIN
			

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with the eyes, skin and clothing. Avoid breathing vapors. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.



Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

Conditions for Safe Storage: Store in a container in a cool, well ventilated location away from heat and incompatible materials. Protect from physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

Glycerin	United States	5 mg/m ³ TWA US OSHA PEL (respirable fraction); 15 mg/m ³ TWA US OSHA PEL (Total dust) 10 mg/m ³ TWA ACGIH TLV (as mist)
	Germany	50 mg/m ³ TWA DFG MAK (inhalable) 100 mg/m ³ STEL DFG MAK (inhalable)
	United Kingdom	10 mg/m ³ TWA UK WEL
	European Union	None Established

Sodium Silicate	United States	None Established	
	Germany	None Established	
	United Kingdom	None Established	
	European Union	None Established	
Sodium 2-ethylhexyl sulfate	United States	None Established	
	Germany	None Established	
	United Kingdom	None Established	
	European Union	None Established	
Ammonium Hydroxide` (as ammonia)	United States	25 ppm TWA, 35 ppm STEL ACGIH TLV 50 ppm TWA OSHA PEL	
	Germany	20 ppm TWA, 40 ppm STEL DFG MAK	
	United Kingdom	25 ppm TWA, 35 ppm STEL UK WEL	
	European Union	20 ppm TWA, 50 STEL EU OEL	
Biological Exposure Limits: None Established			
Appropriate Engineering Controls: Use with adequate local exhaust ventilation to maintain exposures below the occupational exposure limits.			
Individual Protection Measures (PPE) Specific Eye/face Protection: Chemical safety goggles should be worn where splashing is possible. Specific Skin Protection: Wear impervious gloves such as butyl rubber or neoprene if needed to avoid skin contact. Specific Respiratory Protection: None should be needed for normal use. If the exposure limits are exceeded an approved respirator with ammonia cartridges or supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice. Specific Thermal Hazards: None required.			
Recommended Personal Protective Equipment			
EYES/FACE	HANDS	RESPIRATORY	SKIN
			
Environmental Exposure Controls: Do not allow spills to enter sewers or waterways.			
General Hygiene Considerations and Work Practices: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.			
Protective Measures During Repair and Maintenance of Contaminated Equipment: Wear appropriate protective clothing and equipment.			

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Semi-transparent liquid	Explosive limits:	LEL: 16% (ammonium hydroxide) UEL: 25% (ammonium hydroxide)
Odor:	Ammonia odor	Vapor pressure (mmHg):	Not available.
Odor threshold:	Not determined	Vapor density:	0.6
pH:	Not available	Relative density:	1.13 @ 25°C
Melting/freezing point:	Not available	Solubility:	Completely miscible
Initial boiling point and range:	Not available	Partition coefficient: n-octanol/water:	Not available
Flash point:	Not flammable	Auto-ignition temperature:	Not applicable
Evaporation rate:	<1 (butyl acetate=1)	Decomposition temperature:	Not determined
Flammability:	Not flammable	Viscosity:	Not applicable
Explosive Properties:	Not determined	Oxidizing Properties:	None
% Volatile by Volume:	Not available		

10. STABILITY AND REACTIVITY

Reactivity: None known.
Chemical Stability: Stable under normal condition.
Possibility of Hazardous Reactions: Reacts with most common metals to form flammable hydrogen gas.
Conditions to Avoid: Avoid heat and direct sunlight.
Incompatible materials: Avoid oxidizing agents, acids, acroelin, dimethyl sulfate, halogens, silver compounds, propylene oxide, nitro methane, oleum, beta-propionitrile, iodine and most common metals.
Hazardous Decomposition Products: Decomposition may release oxides of carbon, nitrogen and ammonia.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: Liquid may cause moderate irritation. Vapors may cause irritation with redness, burning and tearing.

Skin: May cause irritation. Prolonged exposure may cause dermatitis.

Ingestion: Ingestion may cause irritation of the mucous membranes, esophagus and stomach.

Inhalation: Inhalation of vapors or mists may cause irritation to the nose, throat and upper respiratory tract with coughing and shortness of breath.

Chronic Health Effects: Prolonged overexposure may cause dermatitis and erosion of the teeth.

Carcinogenicity: Glycerin: No increase in tumor incidence was found in a 2 year oral feeding study with rats at doses of 5 and 10 g/kg. None of the components of this product are listed as carcinogens by OSHA, IARC, NTP, ACGIH or the EU Substances Directive.

Mutagenicity: Glycerin: Negative in AMES, in vitro sister chromatid exchange and unscheduled DNA synthesis.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing skin and respiratory disorders may be at increased risk from exposure.

Acute Toxicity Data:

Glycerin: Oral rabbit LD50 >12,600 mg/kg ; Skin rabbit LD50 - >10,000 mg/kg; Inhalation rat LC50 - >570 mg/m³/1hr

Sodium Silicate: Oral rat LC50 – 1960 mg/kg; Skin rabbit LD50 - >4640 mg/kg

Sodium 2-ethylhexyl sulfate: Oral rat LD50 – 4000 mg/kg; skin rabbit LD50- 6.54 mL/kg

Ammonium Hydroxide: Oral Rabbit LD50 - 350 mg/kg

Reproductive Toxicity Data: Glycerin: No effects were observed in a 2 generation study at doses of 0.2 mg/kg/day. No developmental effects were observed in rabbits administered up to 1180 mg/kg or in rats or mice administered up to 1310 mg/kg. This product is not expected to cause adverse reproductive effects.

Specific Target Organ Toxicity (STOT):

Single Exposure: Glycerin: When place into the eye of a rabbit, glycerin will cause an inflammatory reaction, edema of the cornea and damage of the endothelial cells.

Repeated Exposure: Glycerin: In a 13 week sub-chronic inhalation study with rats, glycerin was found to cause mild irritation of mucous membranes. In a 2 year study in rats, no adverse effects were found in animals with 20% glycerin in their feed.

12. ECOLOGICAL INFORMATION

Toxicity:

Glycerin: 24 hr LC50 Goldfish - >5000 mg/L; 48 hr EC50 Daphnia magna -10,000 mg/L

Sodium Silicate: 96 hr LC50 Zebra fish – 3185 mg/L; 96 hr EC50 Daphnia magna – 216 mg/L

Ammonium Hydroxide: 24 hr LC50 Rainbow trout- 0.008 mg/L; 96 hr LC50 fathead minnow- 8.2 mg/L

Persistence and Degradability: Glycerin is readily biodegradable (63% after 14 days).

Bio-accumulative Potential: Glycerin is not expected to bio concentrate in fish and aquatic organisms.

Mobility in Soil: Glycerin: Very high mobility in soil.

Other Adverse Effects: None

Results of PBT/vPvB Assessment: Not applicable.

13. DISPOSAL CONSIDERATIONS

Regulations: Dispose in accordance with all national and local regulations.

Properties (Physical/Chemical) Affecting Disposal: Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

Waste Treatment Recommendations: Dispose in accordance with national and local regulations.

14. TRANSPORT INFORMATION

UN Number:	ADR/RID: None	IMDG: None	IATA: None	DOT: None
UN proper shipping name:	ADR/RID: Not Regulated IMDG: Not Regulated IATA: Not Regulated DOT: Not Regulated			
Transport hazard class(es):	ADR/RID: None	IMDG: None	IATA: None	DOT: None
Packaging group:	ADR/RID: None	IMDG: None	IATA: None	DOT: None
Environmental hazards:	ADR/RID: No	IMDG Marine pollutant: No	IATA: No	DOT: No
Special precautions for user: Not applicable				

15. REGULATORY INFORMATION

U.S. Federal Regulations

US OSHA Hazard Classification: Irritant

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): This product has a Reportable Quantity (RQ) of 10,000 lbs. (based on the RQ for Ammonium Hydroxide of 1,000 lbs present at <1%). Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Toxic Substances Control Act (TSCA): All of the components of this product are listed on the TSCA inventory.

Clean Water Act (CWA): This material is not regulated under the Clean Water Act.

Clean Air Act (CAA): This material is not regulated under the Clean Air Act.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 (40 CFR 370) Hazard Categories:

Immediate Hazard:	Yes	Pressure Hazard:	No
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Delayed Hazard:	No	Reactivity Hazard:	No
Fire Hazard:	No		

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

Components	C.A.S. #	WT %
None		

Note: Ammonia Solutions with 20% or greater Ammonia are reportable)

State Regulations

California: This product contains the following substances known to the state of California to cause cancer and/or reproductive toxicity:

Components	C.A.S. #	WT %
None		

International Regulations

Canadian Workplace Hazardous Materials Information System (WHMIS): Class D Division 2B Toxic material causing other chronic effects

Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL).

This SDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the SDS contains all of the information required by the CPR.

European Inventory of Existing Chemicals (EINECS): All of the components in this product are listed on the EINECS inventory.

EU REACH: All components requiring registration have been pre-registered.

Australian Inventory of Chemical Substances: All of the components in this product are listed on the AICS for Australia.

China Inventory of Existing Chemicals and Chemical Substances: All of the components in this product are listed on the IECSC for China.

Japanese Existing and New Chemical Substances: All of the components in this product are listed on the Japanese ENCS list.

Korean Existing Chemicals List: All of the components in this product are listed on the KECL for Korea.

Philippine Inventory of Chemicals and Chemical Substances: All of the components in this product are listed on the PICCS.

16. OTHER INFORMATION

HMIS Hazard Rating:

Health – 2 Flammability – 1 Physical Hazard – 0

Full text of Classification abbreviations used in Section 2 and 3:

C Corrosive
N Dangerous for the Environment
Xi Irritant
R34 Causes burns.
R36/37/38 Irritating to eyes, respiratory system and skin.
R50 Very toxic to aquatic organisms.
Aquatic Acute 1 Aquatic Acute Toxicity Category 1
Eye Irrit. 2A Eye Irritant Category 2A
Skin Corr. 1B Skin Corrosion Category 1B
Skin Irrit. 2 Skin Irritant Category 2
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H400 Very Toxic to aquatic life.

Supersedes: 23 March 2009

Revision Summary: Change in format. Comprehensive review. Changes to all sections.

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau, ESIS, Country websites for occupational exposure limits.

Safety Data Sheet

Safety Data Sheet conforms to Regulation (EC) 1907/2006, Regulation (EC) 1272/2008, Regulation (EC) 2015/830, US 29CFR1910.1200, and Canada Hazardous Products Regulation.

Date Issued: 13 February 2002
Document Number: 333
Date Revised: 29 March 2019
Revision Number: 10

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier:

Trade Name (as labeled): Dentsply Sirona Protective Coat Liquid
Part/Item Number: N025835

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:

Recommended Use: Refractory Model Sealant
Restrictions on Use: For Professional Use Only

1.3 Details of the Supplier of the Safety Data Sheet:

Manufacturer/Supplier Name: Dentsply Sirona Prosthetics
Manufacturer/Supplier Address: 570 West College Ave.
York, PA 17401
Manufacturer/Supplier Telephone Number: 717-845-7511 (Product Information)
Email address: Prosthetics_MSDS@dentsplysirona.com

1.4 Emergency Telephone Number:

Emergency Contact Telephone Number: 800-243-1942

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture:

GHS Classification:		
Health	Environmental	Physical
Eye Irritant Category 2A (H319) Skin Irritant Category 2 (H315)	Not Hazardous	Not Hazardous

2.2 Label Elements:



Signal Word: Warning

Contains: Sodium Silicate

Hazard Phrases	Precautionary Phrases
H315 Causes skin irritation. H319 Causes serious eye irritation.	P264 Wash thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical attention. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P332+P313 If skin irritation occurs: Get medical attention. P362+P364 Take off contaminated clothing and wash before reuse.

2.3 Other Hazards: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture:

Hazardous Components	C.A.S. #	EINECS # / REACH Registration #	Classification	WT %
Glycerin	56-81-5	200-289-5 /	Not Applicable	5-15
Sodium Silicate	1344-09-8	215-687-4 /	Eye Irrit. 2A, H319 Skin Irrit. 2, H315	5-15
Sodium 2-ethylhexyl sulfate	126-92-1	204-812-8 /	Eye Dam. 1, H318 Skin Irrit. 2, H315 STOT SE 3, H335	<2
Ammonium Hydroxide	1336-21-6	215-647-6 /	Skin Corr. 1A, H314 Eye Dam 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400	<1

The exact concentration is being withheld as a trade secret.

Refer to Section 16 for the full text of the GHS Classifications.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye	Immediately flush eyes with large quantities of water for several minutes, while holding the eyelids apart. Remove contact lenses if easy to do so. Continue rinsing. Get medical attention if irritation persists.
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Skin	Remove contaminated clothing and shoes. Flush skin thoroughly with water for several minutes. Get medical attention if irritation occurs. Launder clothing before re-use.
Inhalation	If irritation develops, remove to fresh air. Get medical attention if symptoms persist.
Ingestion	Do not induce vomiting. If conscious, wash mouth out with water. Never give anything by mouth to an unconscious or convulsing person. Get medical attention if you feel unwell.
4.2 Most Important Symptoms and Effects, Both Acute and Delayed:	
May cause moderate eye and skin irritation. Inhalation of vapors or mist may cause mucous membrane and respiratory irritation.	
4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed:	
Immediate medical attention is generally not required.	

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media:	Use media appropriate for surrounding fire.
5.2 Special Hazards Arising from the Substance or Mixture:	
Reacts with most metals to form flammable hydrogen gas. Decomposition may release oxides of carbon, nitrogen and ammonia.	
5.3 Advice for Fire-Fighters:	
Fire Fighting Procedures/Precautions for Fire Fighters:	Cool exposed intact containers with water spray. Firefighters should wear full emergency equipment and approved positive pressure self-contained breathing apparatus. Do not enter fire area without proper protection. Contain water used in firefighting from entering sewers or natural waterways.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:	
Evacuate spill area and keep unprotected personnel away. Ventilate area. Avoid contact with skin, eyes or clothing. Wear appropriate protective clothing as described in Section 8.	
6.2 Environmental Precautions:	
Avoid releases to the environment. Report releases as required by local and national authorities.	
6.3 Methods and Material for Containment and Cleaning up:	
Collect using an inert material and place in appropriate container for disposal.	
6.4 Reference to Other Sections:	
Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information.	

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Avoid contact with the eyes, skin and clothing. Wear protective clothing and equipment as described in Section 8. Avoid breathing vapors. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.

Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

7.2 Conditions for Safe Storage, Including Any Incompatibilities: Store in a container in a cool, well ventilated location away from heat and incompatible materials. Protect from physical damage.

7.3 Specific End Use (s): For professional use only.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Occupational Exposure Limits:

Glycerin (as mist)	5 mg/m ³ TWA OSHA PEL (respirable fraction)
	15 mg/m ³ TWA OSHA PEL (Total dust)
	200 mg/m ³ TWA, 400 mg/m ³ STEL DFG MAK (inhalable)
	10 mg/m ³ TWA UK WEL
	10 mg/m ³ TWA Belgium OEL
Sodium Silicate	None Established
Sodium 2-ethylhexyl sulfate	None Established
Ammonium Hydroxide (as ammonia)	25 ppm TWA, 35 ppm STEL ACGIH TLV
	50 ppm TWA OSHA PEL
	20 ppm TWA, 40 ppm STEL DFG MAK
	25 ppm TWA, 35 ppm STEL UK WEL
	20 ppm TWA, 50 ppm STEL EU OEL
	20 ppm TWA, 50 ppm STEL Belgium OEL

Biological Exposure Limits: None Established

8.2 Exposure Controls:

Appropriate Engineering Controls: Use with adequate local exhaust ventilation to maintain exposures below the occupational exposure limits.

Individual Protection Measures (PPE):

Specific Eye/face Protection: Chemical safety goggles are recommended to avoid eye contact. In Europe follow EN 166.

Specific Skin Protection: Wear impervious gloves such to prevent prolonged skin contact. Contact your glove supplier for selection assistance. In Europe follow EN 374.

Specific Respiratory Protection: None should be needed for normal use. If the exposure limits are exceeded an approved respirator with ammonia cartridges or supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

Specific Thermal Hazards: None required.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance:	Semi-transparent liquid	Explosive limits:	LEL: 16% (ammonium hydroxide) UEL: 25% (ammonium hydroxide)
Odor:	Ammonia odor	Vapor pressure (mmHg):	Not available.
Odor threshold:	Not determined	Vapor density: (Air = 1)	0.6
pH:	Not available	Relative density:	1.13 @ 25°C
Melting/freezing point:	Not available	Solubility:	Completely miscible
Initial boiling point and range:	Not available	Partition coefficient: n-octanol/water:	Not available
Flash point:	Not flammable	Auto-ignition temperature:	Not applicable
Evaporation rate: (n-BuAc = 1)	<1 (butyl acetate=1)	Decomposition temperature:	Not determined
Flammability:	Not flammable	Viscosity:	Not applicable
Explosive Properties:	Not determined	Oxidizing Properties:	None

9.2 Other Information: None available

10. STABILITY AND REACTIVITY

10.1 Reactivity: Non-reactive

10.2 Chemical Stability: Stable under normal storage and handling conditions.

10.3 Possibility of Hazardous Reactions: Reacts with most common metals to form flammable hydrogen gas.

10.4 Conditions to Avoid: Keep away from heat, open flames, and direct sunlight.

10.5 Incompatible materials: Avoid oxidizing agents, acids, acroelin, dimethyl sulfate, halogens, silver compounds, propylene oxide, nitromethane, oleum, beta-propionitrile, iodine and most common metals.

10.6 Hazardous Decomposition Products: Decomposition may release oxides of carbon, nitrogen and ammonia

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Potential Health Effects:

Eyes: Liquid may cause moderate eye irritation. Vapors may cause irritation with redness, burning and tearing.

Skin: May cause moderate skin irritation. Prolonged exposure may cause dermatitis.

<u>Ingestion:</u> Ingestion may cause irritation of the mucous membranes, esophagus and stomach.
<u>Inhalation:</u> Inhalation of vapors or mists may cause irritation to the nose, throat and upper respiratory tract with coughing and shortness of breath.
<u>Chronic Health Effects:</u> None expected under normal use.
<u>Irritation:</u> Product is irritating to eyes and skin.
<u>Corrosivity:</u> This product is not expected to be corrosive.
<u>Sensitization:</u> Not a sensitizer
<u>Carcinogenicity:</u> None of the components of this product at 0.1% or greater are listed as carcinogens by OSHA, IARC, NTP, ACGIH or the EU CLP.
<u>Mutagenicity:</u> No data available.
<u>Aspiration Hazard:</u> Not an aspiration hazard
<u>Acute Toxicity Data:</u> Glycerin: Oral rabbit LD50 >12,600 mg/kg, Skin rabbit LD50 - >10,000 mg/kg, Inhalation rat LC50 - >570 mg/m ³ /1hr Sodium Silicate: Oral rat LC50 – 1960 mg/kg, Skin rabbit LD50 - >4640 mg/kg Sodium 2-ethylhexyl sulfate: Oral rat LD50 – 4000 mg/kg, skin rabbit LD50- 6.54 mL/kg Ammonium Hydroxide: Oral Rabbit LD50 - 350 mg/kg
<u>Reproductive Toxicity Data:</u> No data available.
<u>Specific Target Organ Toxicity Single Exposure (STOT-SE):</u> Glycerin: No effects were observed in a 2 generation study at doses of 0.2 mg/kg/day. No developmental effects were observed in rabbits administered up to 1180 mg/kg or in rats or mice administered up to 1310 mg/kg. This product is not expected to cause adverse reproductive effects.
<u>Specific Target Organ Toxicity Repeated Exposure (STOT-RE):</u> Glycerin: In a 13 week sub-chronic inhalation study with rats, glycerin was found to cause mild irritation of mucous membranes. In a 2 year study in rats, no adverse effects were found in animals with 20% glycerin in their feed.

12. ECOLOGICAL INFORMATION

12.1 Toxicity: Glycerin: 24 hr LC50 Goldfish - >5000 mg/L, 48 hr EC50 Daphnia magna -10,000 mg/L Sodium Silicate: 96 hr LC50 Zebra fish – 3185 mg/L, 96 hr EC50 Daphnia magna – 216 mg/L Ammonium Hydroxide: 24 hr LC50 Rainbow trout- 0.008 mg/L, 96 hr LC50 fathead minnow- 8.2 mg/L
12.2 Persistence and Degradability: Glycerin is readily biodegradable (63% after 14 days).
12.3 Bio-accumulative Potential: Glycerin is not expected to bioconcentrate in fish and aquatic organisms.
12.4 Mobility in Soil: Glycerin: Very high mobility in soil.
12.5 Results of PBT and vPvB Assessment: Not required
12.6 Other Adverse Effects: None known

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:

Waste Treatment Recommendations: Treat in accordance with national and local regulations.

14. TRANSPORT INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
DOT	None	Not Regulated	None	None	None
ADR/RID	None	Not Regulated	None	None	None
IMDG	None	Not Regulated	None	None	None
IATA/ICAO	None	Not Regulated	None	None	None

14.6 Special Precautions for User: Not applicable.

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): This product has a Reportable Quantity (RQ) of 10,000 lbs. (based on the RQ for Ammonium Hydroxide of 1,000 lbs present at <1%). Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Toxic Substances Control Act (TSCA): All of the components of this product are listed on the TSCA inventory.

Clean Water Act (CWA): This material is not regulated under the Clean Water Act.

Clean Air Act (CAA): This material is not regulated under the Clean Air Act.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 (40 CFR 370) Hazard Categories: See OSHA Hazard Classification in Section 2.

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372): None

Note: Ammonia Solutions with 20% or greater Ammonia are reportable

State Regulations

California: This product does not contain substances known in the state of California to cause cancer and/or reproductive toxicity.

International Regulations

Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL).

European Inventory of Existing Chemicals (EINECS): All of the components in this product are listed on the EINECS inventory.

EU REACH: All components requiring registration have been pre-registered.

Australian Inventory of Chemical Substances: All of the components in this product are listed on the AICS for Australia.

China Inventory of Existing Chemicals and Chemical Substances: All of the components in this product are listed on the IECSC for China.

Japanese Existing and New Chemical Substances: All of the components in this product are listed on the Japanese ENCS list.

Korean Existing Chemicals List: All of the components in this product are listed on the KECL for Korea.

Philippine Inventory of Chemicals and Chemical Substances: All of the components in this product are listed on the PICCS.

15.2 Chemical Safety Assessment: None required.

16. OTHER INFORMATION

HMIS Hazard Rating:

Health – 2 Flammability – 0 Physical Hazard – 0

Full text of Classification abbreviations used in Section 2 and 3:

Aquatic Acute 1 Aquatic Acute Toxicity Category 1

Eye Dam 1 Eye Damage Category 1

Eye Irrit. 2A Eye Irritant Category 2A

Skin Corr. 1A Skin Corrosion Category 1A

Skin Irrit. 2 Skin Irritant Category 2

STOT SE 3 Specific Target Organ Toxicity – Single Exposure Category 3

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 May cause serious eye damage

H319 Causes serious eye irritation.

H335 May cause respiratory irritation

H400 Very Toxic to aquatic life.

Supersedes: 7 August 2018

Date Updated: 29 March 2019

Revision Summary: Updated section 1.

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, ECHA REACH Registration Website, Country websites for occupational exposure limits.