

SAFETY DATA SHEET



Offgel Room Temp Kit Hi Res, Part Number 5067-0201

Section 1. Identification

1.1 Product identifier

Product name : Offgel Room Temp Kit Hi Res, Part Number 5067-0201
Part No. (Chemical Kit) : 5067-0201
Part No. : Urea 5188-6435
 Glycerol 50 percent 5188-6440
 Mineral Oil 5188-6443
Validation date : 4/30/2015.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses : Analytical chemistry.
 Urea 25.2 g
 Glycerol 50 percent 10 ml
 Mineral Oil 50 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
 5301 Stevens Creek Blvd
 Santa Clara, CA 95051, USA
 800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : Urea This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 Glycerol 50 percent This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 Mineral Oil This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Urea
 Comb. Dusts COMBUSTIBLE DUSTS
Glycerol 50 percent
 H320 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B

2.2 GHS label elements

Signal word : Urea Warning
 Glycerol 50 percent Warning
 Mineral Oil No signal word.
Hazard statements : Urea No Code(s) - May form combustible dust concentrations in air.
 Glycerol 50 percent H320 - Causes eye irritation.
 Mineral Oil No known significant effects or critical hazards.

Section 2. Hazards identification

Precautionary statements

Prevention	: Urea Glycerol 50 percent Mineral Oil	Not applicable. P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling. Not applicable.
Response	: Urea Glycerol 50 percent Mineral Oil	Not applicable. 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. Not applicable.
Storage	: Urea Glycerol 50 percent Mineral Oil	Not applicable. Not applicable. Not applicable.
Disposal	: Urea Glycerol 50 percent Mineral Oil	Not applicable. Not applicable. Not applicable.
Supplemental label elements	: Avoid contact with skin and clothing.	Wash thoroughly after handling.

2.3 Other hazards

Hazards not otherwise classified	: Urea Glycerol 50 percent Mineral Oil	Fine dust clouds may form explosive mixtures with air. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat. None known. Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation.
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Section 3. Composition/information on ingredients

Substance/mixture	: Urea Glycerol 50 percent Mineral Oil	Substance Mixture Substance
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Ingredient name	%	CAS number
Urea Urea	60 - 100	57-13-6
Glycerol 50 percent Glycerol	30 - 60	56-81-5
Mineral Oil White mineral oil (petroleum)	60 - 100	8042-47-5

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

4.1 Description of necessary first aid measures

Eye contact	: Urea	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.
	Glycerol 50 percent	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. If irritation persists, get medical attention.
	Mineral Oil	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.
Inhalation	: Urea	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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Glycerol 50 percent	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.
	Mineral Oil	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: Urea	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.
	Glycerol 50 percent	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.
	Mineral Oil	Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated

Section 4. First aid measures

Ingestion

: Urea

clothing and shoes. Get medical attention if symptoms occur.

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 adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. 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.

Glycerol 50 percent

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 adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. 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.

Mineral Oil

Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: Urea

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Causes eye irritation.

No known significant effects or critical hazards.

Glycerol 50 percent
Mineral Oil

Inhalation

: Urea

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

Glycerol 50 percent
Mineral Oil

Section 4. First aid measures

Skin contact	: Urea Glycerol 50 percent Mineral Oil	No known significant effects or critical hazards. No known significant effects or critical hazards. Defatting to the skin. May cause skin dryness and irritation.
Ingestion	: Urea Glycerol 50 percent Mineral Oil	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<u>Over-exposure signs/symptoms</u>		
Eye contact	: Urea Glycerol 50 percent Mineral Oil	Adverse symptoms may include the following: irritation redness Adverse symptoms may include the following: irritation watering redness No specific data.
Inhalation	: Urea Glycerol 50 percent Mineral Oil	Adverse symptoms may include the following: respiratory tract irritation coughing No specific data. No specific data.
Skin contact	: Urea Glycerol 50 percent Mineral Oil	No specific data. No specific data. Adverse symptoms may include the following: irritation dryness cracking
Ingestion	: Urea Glycerol 50 percent Mineral Oil	No specific data. No specific data. No specific data.

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

Notes to physician	: Urea Glycerol 50 percent Mineral Oil	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Urea Glycerol 50 percent Mineral Oil	No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: Urea Glycerol 50 percent Mineral Oil	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. 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. No action shall be taken involving any personal risk or without suitable training.

Section 4. First aid measures

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Urea Glycerol 50 percent Mineral Oil	Use dry chemical powder. Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO ₂ , alcohol-resistant foam or water spray (fog).
Unsuitable extinguishing media	: Urea Glycerol 50 percent Mineral Oil	Do not use water jet. None known. Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: Urea Glycerol 50 percent Mineral Oil	Fine dust clouds may form explosive mixtures with air. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: Urea Glycerol 50 percent Mineral Oil	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters	: Urea Glycerol 50 percent Mineral Oil	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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. 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. 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.
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Section 5. Fire-fighting measures

Special protective equipment for fire-fighters	: Urea	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Glycerol 50 percent	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Mineral Oil	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

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Urea	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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Glycerol 50 percent	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.
	Mineral Oil	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. Put on appropriate personal protective equipment.
For emergency responders	: Urea	If specialised 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".
	Glycerol 50 percent	If specialised 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".
	Mineral Oil	If specialised 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".

Section 6. Accidental release measures

6.2 Environmental precautions	: Urea	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).
	Glycerol 50 percent	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).
	Mineral Oil	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).

6.3 Methods and materials for containment and cleaning up

Urea	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Glycerol 50 percent	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.
Mineral Oil	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.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures	: Urea	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
	Glycerol 50 percent	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

Section 7. Handling and storage

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. Put on appropriate personal protective equipment (see Section 8).

Mineral Oil

Advice on general occupational hygiene

: 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.

7.2 Conditions for safe storage, including any incompatibilities

: Urea

Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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.

Glycerol 50 percent

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.

Mineral Oil

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.

7.3 Specific end use(s)

Recommendations

: Urea Industrial applications, Professional applications.
 Glycerol 50 percent Industrial applications, Professional applications.
 Mineral Oil Industrial applications, Professional applications.

Industrial sector specific solutions

: Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Urea Urea	AIHA WEEL (United States, 10/2011). TWA: 10 mg/m ³ 8 hours.
Glycerol 50 percent Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
Mineral Oil White mineral oil (petroleum)	ACGIH TLV (United States, 4/2014). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2013). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours.

8.2 Exposure controls

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of 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.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face 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: chemical splash goggles.

Skin protection

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.

Section 8. Exposure controls/personal protection

- Body protection** : 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.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Urea Glycerol 50 percent Mineral Oil	Solid. [Crystals. / Powder. / Granular solid.] Liquid. Liquid. [Oily liquid.]
Color	: Urea Glycerol 50 percent Mineral Oil	White. Not available. Colorless.
Odor	: Urea Glycerol 50 percent Mineral Oil	Odorless. / Ammoniacal. Not available. Not available.
Odor threshold	: Urea Glycerol 50 percent Mineral Oil	Not available. Not available. Not available.
pH	: Urea Glycerol 50 percent Mineral Oil	7.2 [Conc. (% w/w): 10%] Not available. Not available.
Melting point	: Urea Glycerol 50 percent Mineral Oil	134°C (273.2°F) Not available. -60 to -9°C (-76 to 15.8°F)
Boiling point	: Urea Glycerol 50 percent Mineral Oil	Decomposition temperature: >135°C (>275°F) Not available. 179 to 210°C (354.2 to 410°F)
Flash point	: Urea Glycerol 50 percent Mineral Oil	Not available. Not available. Closed cup: 135°C (275°F)
Evaporation rate	: Urea Glycerol 50 percent Mineral Oil	Not available. Not available. Not available.
Flammability (solid, gas)	: Urea Glycerol 50 percent Mineral Oil	Not available. Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: Urea Glycerol 50 percent Mineral Oil	Not available. Not available. Not available.
Vapor pressure	: Urea Glycerol 50 percent Mineral Oil	0 kPa (0 mm Hg) [room temperature] Not available. 0.011 kPa (0.08 mm Hg) [room temperature]
Vapor density	: Urea Glycerol 50 percent Mineral Oil	Not available. Not available. Not available.

Section 9. Physical and chemical properties

Relative density	: Urea	1.32
	Glycerol 50 percent	Not available.
	Mineral Oil	0.875 to 0.905
Solubility	: Urea	Easily soluble in the following materials: cold water and hot water.
	Glycerol 50 percent	Soluble in the following materials: cold water and hot water.
	Mineral Oil	Soluble in the following materials: diethyl ether. Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Urea	<-1.73
	Glycerol 50 percent	Not available.
	Mineral Oil	>6
Auto-ignition temperature	: Urea	Not available.
	Glycerol 50 percent	Not available.
	Mineral Oil	260 to 371.11°C (500 to 700°F)
Decomposition temperature	: Urea	>135°C (>275°F)
	Glycerol 50 percent	Not available.
	Mineral Oil	Not available.
Viscosity	: Urea	Dynamic (room temperature): 1.9 mPa·s (1.9 cP)
	Glycerol 50 percent	Not available.
	Mineral Oil	Kinematic (40°C (104°F)): >0.013 cm ² /s (>1.3 cSt)

Section 10. Stability and reactivity

10.1 Reactivity	: Urea	No specific test data related to reactivity available for this product or its ingredients.
	Glycerol 50 percent	No specific test data related to reactivity available for this product or its ingredients.
	Mineral Oil	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Urea	The product is stable.
	Glycerol 50 percent	The product is stable.
	Mineral Oil	The product is stable.
10.3 Possibility of hazardous reactions	: Urea	Under normal conditions of storage and use, hazardous reactions will not occur.
	Glycerol 50 percent	Under normal conditions of storage and use, hazardous reactions will not occur.
	Mineral Oil	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Urea	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
	Glycerol 50 percent	No specific data.
	Mineral Oil	No specific data.

Section 10. Stability and reactivity

10.5 Incompatible materials	: Urea Glycerol 50 percent Mineral Oil	Reactive or incompatible with the following materials: oxidizing materials No specific data. No specific data.
10.6 Hazardous decomposition products	: Urea Glycerol 50 percent Mineral Oil	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Urea Urea	LD50 Oral	Rat	8471 mg/kg	-
Glycerol 50 percent Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Mineral Oil White mineral oil (petroleum)	LD50 Oral	Rat	>5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Glycerol 50 percent Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-		24 hours 500 milligrams

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Mineral Oil White mineral oil (petroleum)	skin	Guinea pig	Not sensitizing

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure	: Urea Glycerol 50 percent Mineral Oil	Routes of entry anticipated: Oral, Inhalation. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation.
 <u>Potential acute health effects</u>		
Eye contact	: Urea Glycerol 50 percent Mineral Oil	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes. Causes eye irritation. No known significant effects or critical hazards.
Inhalation	: Urea Glycerol 50 percent Mineral Oil	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Urea Glycerol 50 percent Mineral Oil	No known significant effects or critical hazards. No known significant effects or critical hazards. Defatting to the skin. May cause skin dryness and irritation.
Ingestion	: Urea Glycerol 50 percent Mineral Oil	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Urea Glycerol 50 percent Mineral Oil	Adverse symptoms may include the following: irritation redness Adverse symptoms may include the following: irritation watering redness No specific data.
Inhalation	: Urea Glycerol 50 percent Mineral Oil	Adverse symptoms may include the following: respiratory tract irritation coughing No specific data. No specific data.
Skin contact	: Urea Glycerol 50 percent Mineral Oil	No specific data. No specific data. Adverse symptoms may include the following: irritation dryness cracking
Ingestion	: Urea Glycerol 50 percent Mineral Oil	No specific data. No specific data. No specific data.

Section 11. Toxicological information

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

General	: Urea Glycerol 50 percent Mineral Oil	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. No known significant effects or critical hazards. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity	: Urea Glycerol 50 percent Mineral Oil	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Urea Glycerol 50 percent Mineral Oil	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: Urea Glycerol 50 percent Mineral Oil	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: Urea Glycerol 50 percent Mineral Oil	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: Urea Glycerol 50 percent Mineral Oil	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Other information	: Urea Glycerol 50 percent Mineral Oil	Not available. Not available. Not available.
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Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Urea Urea	Acute EC50 3910000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1000 mg/l Marine water	Crustaceans - Chaetogammarus marinus - Young	48 hours
	Acute LC50 22.5 ppt Fresh water	Fish - Oreochromis mossambicus - Young	96 hours
	Chronic NOEC 2 g/L Fresh water	Fish - Heteropneustes fossilis	30 days

Section 12. Ecological information

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Urea Urea	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Urea Urea	<-1.73	-	low
Glycerol 50 percent Glycerol	-1.76	-	low
Mineral Oil White mineral oil (petroleum)	>6	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

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.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

Regulatory information

DOT / IMDG / IATA : Not regulated.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : **United States inventory (TSCA 8b)**: 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

No products were found.

SARA 304 RQ : Not applicable.

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
Urea Urea	60 - 100	Yes.	No.	No.	No.	No.
Glycerol 50 percent Glycerol	30 - 60	No.	No.	No.	Yes.	No.
Mineral Oil White mineral oil (petroleum)	60 - 100	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; OIL MIST, MINERAL; MINERAL OIL (HIGHLY REFINED)

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL

California Prop. 65

No products were found.

Canada inventory : All components are listed or exempted.

International regulations

Section 15. Regulatory information

International lists	Australia inventory (AICS): All components are listed or exempted. China inventory (IECSC): All components are listed or exempted. Japan inventory: Not determined. 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 Chemicals	: Not listed
Chemical Weapons Convention List Schedule II Chemicals	: Not listed
Chemical Weapons Convention List Schedule III Chemicals	: Not listed

Section 16. Other information

History

Date of issue	: 4/30/2015.
Date of previous issue	: No previous validation.
Version	: 1

✔ Indicates information that has changed from previously issued version.

Notice to reader

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