

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight-% |
|---------------------------------|----------|----------|
| Di(ethylene glycol) ethyl ether | 111-90-0 | >95 |

4. FIRST AID MEASURES

First Aid Measures

- General Advice** Provide this SDS to medical personnel for treatment.
- Eye Contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
- Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.
- Inhalation** Remove to fresh air. Get medical attention if symptoms develop and persist.
- Ingestion** Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms develop and persist.

Most important symptoms and effects

- Symptoms** Not determined.

Indication of any immediate medical attention and special treatment needed

- Notes to Physician** Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Carbon dioxide (CO2). Dry powder.

- Unsuitable Extinguishing Media** Not determined.

Specific Hazards Arising from the Chemical

Combustible liquid. Closed containers may explode due to buildup of pressure when exposed to extreme heat.

- Hazardous Combustion Products** Smoke, fumes or vapors, and oxides of carbon.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal Precautions** Evacuate personnel to safe areas. Use personal protective equipment as required.

Environmental precautions

Environmental precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Wear protective gloves/protective clothing and eye/face protection. Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials Strong oxidants.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear eye/face protection. Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection Wear protective gloves and protective clothing. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection In case of insufficient ventilation, wear suitable respiratory equipment. Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|-----------------------|--------------|-----------------------|----------------|
| Physical state | Liquid | Odor | None |
| Appearance | Clear liquid | Odor Threshold | Not determined |
| Color | Clear | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|---------------------------------------|-------------------------|----------------------------------|
| pH | Not determined | |
| Melting point / freezing point | Not determined | |
| Boiling Point / Boiling Range | 198 °C / 388 °F | |
| Flash Point | 91 °C / 196 °F | Pensky-Martens Closed Cup (PMCC) |
| Evaporation Rate | 0.067 | |
| Flammability (Solid, Gas) | Liquid - Not Applicable | |
| Flammability Limit in Air | | |
| Upper Flammability Limit | Not determined | |
| Lower Flammability Limit | 0.95 | |
| Vapor Pressure | 0.120 | |
| Vapor Density | Not determined | |
| Relative Density | 0.990 | |
| Water Solubility | Completely soluble | |
| Solubility in other solvents | Not determined | |
| Partition Coefficient | Not determined | |
| Autoignition temperature | 398 °C / 750 °F | |
| Decomposition Temperature | Not determined | |
| Kinematic Viscosity | Not determined | |
| Dynamic Viscosity | Not determined | |
| Explosive Properties | Not determined | |
| Oxidizing Properties | Not determined | |
| <u>Other Information</u> | | |
| Density | 0.989 | |

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Heat, flames and sparks.

Incompatible Materials

Strong oxidants.

Hazardous Decomposition Products

Carbon monoxide. Carbon dioxide (CO₂).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation May be harmful if inhaled.

Ingestion Do not ingest.

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|-----------------------|--|--------------------------------------|
| Di(ethylene glycol) ethyl ether 111-90-0 | = 10502 mg/kg (Rat) | = 9143 mg/kg (Rabbit) = 6 mL/kg (Rat) = 4200 µL/kg (Rabbit) | > 5240 mg/m ³ (Rat) 4 h |

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 10,502.00 mg/kg
ATEmix (inhalation-dust/mist) 5.25 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

| Chemical Name | Partition Coefficient |
|---|-----------------------|
| Di(ethylene glycol) ethyl ether 111-90-0 | -0.8 |

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note According to 49 CFR §173.150(f)(1), this material should be reclassified as "NA1993, Combustible Liquid, N.O.S." if it is shipped in bulk.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

| Chemical Name | TSCA | DSL/NDSL | EINECS/E LINC S | ENCS | IECSC | KECL | PICCS | AICS |
|---------------------------------|------|----------|-----------------|------|-------|------|-------|------|
| Di(ethylene glycol) ethyl ether | X | X | X | X | X | X | X | X |

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*
- EINECS/ELINC S - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
- ENCS - Japan Existing and New Chemical Substances*
- IECSC - China Inventory of Existing Chemical Substances*
- KECL - Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*
- AICS - Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---|------------|---------------|--------------|
| Di(ethylene glycol) ethyl ether 111-90-0 | X | | X |

16. OTHER INFORMATION

| | | | | |
|--------------------|-----------------------|---------------------|-------------------------|----------------------------|
| <u>NFPA</u> | Health Hazards | Flammability | Instability | Special Hazards |
| | 2 | 2 | 0 | Not determined |
| <u>HMIS</u> | Health Hazards | Flammability | Physical hazards | Personal Protection |
| | Not determined | Not determined | Not determined | Not determined |

Issue Date: 05-Apr-2018
Revision Date: 12-Apr-2018
Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet