Safety Data Sheet
PROPYLENE GLYCOL USP KOSHER

SECTION 1: Identification

1.1 Product identifier

<table>
<thead>
<tr>
<th></th>
<th>PROPYLENE GLYCOL USP KOSHER</th>
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<tbody>
<tr>
<td>Product name</td>
<td></td>
</tr>
<tr>
<td>Product number</td>
<td>Unavailable</td>
</tr>
<tr>
<td>Brand</td>
<td>Unavailable</td>
</tr>
<tr>
<td>Substance name</td>
<td>1,2-PROPANEDIOL</td>
</tr>
<tr>
<td>EC no.</td>
<td>200-338-0</td>
</tr>
<tr>
<td>CAS no.</td>
<td>57-55-6</td>
</tr>
</tbody>
</table>

1.2 Other means of identification
Unavailable

1.3 Recommended use of the chemical and restrictions on use
Organic synthesis, especially for polypropylene glycol and polyester resins; antifreeze solutions; solvent for fats, oils, waxes, resins, flavoring extracts, perfumes, colors, soft-drink syrups, and antioxidants; cellophane; hygroscopic agent; coolant in refrigeration systems; plasticizers, hydraulic fluids; bactericide; textile conditioners; in foods as a solvent, wetting agent and humectant; emulsifier; feed additive; anticaking agent; preservative (retards mold and fungi); cleansing creams; suntan lotions; pharmaceuticals; brake fluids; deicing fluids for airport runways; substitute for ethylene glycol and glycerol; fermentation inhibitor; as a mist to disinfect air; heat exchangers; as humectant in textiles, tobacco, and pet foods; and in veterinary medicine as a glucogenic (orally) in ruminants.

1.4 Supplier’s details

<table>
<thead>
<tr>
<th></th>
<th>Duda Energy LLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>1112 Brooks St.</td>
</tr>
<tr>
<td></td>
<td>Decatur, AL 35601</td>
</tr>
<tr>
<td></td>
<td>USA</td>
</tr>
<tr>
<td>Telephone</td>
<td>256.340.4866</td>
</tr>
<tr>
<td>Fax</td>
<td>Unavailable</td>
</tr>
<tr>
<td>email</td>
<td>Unavailable</td>
</tr>
</tbody>
</table>

1.5 Emergency phone number(s)
800.255.3924 (Chemtel)
SECTION 2: Hazard identification

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture.

2.2 GHS label elements, including precautionary statements
Not a hazardous substance or mixture.

2.3 Other hazards which do not result in classification
None

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Substance name</th>
<th>1,2-PROPANEDIOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC no.</td>
<td>200-338-0</td>
</tr>
<tr>
<td>CAS no.</td>
<td>57-55-6</td>
</tr>
<tr>
<td>Formula</td>
<td>C3H8O2</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>76.1</td>
</tr>
<tr>
<td>Other names / synonyms</td>
<td>PROPYLENE GLYCOL USP; PROPYLENE GLYCOL; 1,2-PROPANEDIOL</td>
</tr>
</tbody>
</table>

Impurities and stabilizing additives None

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice Wear basic PPE to prevent exposure - splash resistant goggles, chemical resistant clothing.

If inhaled Move to fresh air and consult a physician should effects occur.

In case of skin contact Wash thoroughly with water.

In case of eye contact Flush eyes thoroughly with water for several minutes. If contact lenses are present, remove after the first 1 to 2 minutes then flush for several more minutes. If symptoms arise, consult a physician.

If swallowed Emergency medical treatment is not needed in case of ingestion.

Personal protective equipment for first-aid responders No special protection is needed.

4.2 Most important symptoms/effects, acute and delayed
No known symptoms or effects from acute exposure.
Repeated, excessive exposure may cause issues with central nervous system.

4.3 **Indication of immediate medical attention and special treatment needed, if necessary**
None; treat symptomatically.

**SECTION 5: Fire-fighting measures**

5.1 **Suitable extinguishing media**
Powder, alcohol resistant foam, Carbon dioxide (CO2)
DO NOT use water jet as this will cause the fire to spread.

5.2 **Specific hazards arising from the chemical**
Hazardous gases may develop during fire.

5.3 **Special protective actions for fire-fighters**
SCBA and protective gear should be worn in case of fire.

**Further information**
Use standard firefighting methods and consider the hazards of other materials involved.

**SECTION 6: Accidental release measures**

6.1 **Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Use proper PPE.

6.2 **Environmental precautions**
Avoid discharge into drains, water courses, or onto the ground.

6.3 **Methods and materials for containment and cleaning up**
For large spills: If possible, stop the flow of material. Use water spray to reduce vapors if present. Dike spilled material. Absorb with dry sand, vermiculite, or earth and place waste into containers. Flush area with water.

For small spills: Any absorbent material. Collect in suitable and properly labeled open containers. Wash the spill site with large quantities of water.

**Reference to other sections**
None

**SECTION 7: Handling and storage**

7.1 **Precautions for safe handling**
Observe good general industrial hygiene practices.

7.2 **Conditions for safe storage, including any incompatibilities**
Store tightly sealed in original container, away from incompatible materials.

**Specific end use(s)**
None defined.

**SECTION 8: Exposure controls/personal protection**
8.1 Control parameters

1. Component 1 (trade secret)
   TWA (Aerosol): 10 mg/m³

8.2 Appropriate engineering controls
   Good ventilation should be used (10 air changes per hour is typically sufficient).

8.3 Individual protection measures, such as personal protective equipment (PPE)

   Eye/face protection
   Wear splash resistant goggles or glasses with side-walls/face shield.

   Skin protection
   Wear appropriate chemical resistant clothing.

   Body protection
   Goggles/face-shield, gloves, protective clothing

   Respiratory protection
   In cases where ventilation is poor and airborne levels may rise, wear a respirator fitted with Organic vapor cartridges.

   Thermal hazards
   N/A

   Environmental exposure controls
   Unavailable

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/form (physical state, color, etc.)</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Unavailable</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>-60</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>188.2</td>
</tr>
<tr>
<td>Flash point</td>
<td>99</td>
</tr>
<tr>
<td>Evaporation rate (solid, gas)</td>
<td>Unavailable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper/lower flammability limits</td>
<td>12.6% / 2.6%</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.02 kPa @ 25 °C</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Unavailable</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.0361 @ 20 °C</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Water, at 20 °C</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>log Pow: -1.07</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>&gt;400 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Unavailable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Unavailable</td>
</tr>
</tbody>
</table>
Explosive properties  Not explosive.
Oxidizing properties  Not an oxidizer.

Other safety information
Unavailable.

SECTION 10: Stability and reactivity

10.1 Reactivity
Stable and non-reactive under normal conditions.

10.2 Chemical stability
Material remains stable under normal conditions.

10.3 Possibility of hazardous reactions
No dangerous reaction known under typical conditions.

10.4 Conditions to avoid
Contact with incompatible materials.

10.5 Incompatible materials
Strong oxidizing agents, strong bases, strong acids.

10.6 Hazardous decomposition products
Can include but are not limited to: Aldehydes, Alcohols, Ethers, Organic acids

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Acute oral toxicity
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
LD50, Rat, > 20,000 mg/kg

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

Acute inhalation toxicity
At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).
LC50, Rabbit, 2 Hour, dust/mist, 317.042 mg/l No deaths occurred at this concentration.

Skin corrosion/irritation
Not especially irritating to skin. Repeated exposure may cause some softening of the skin and flaking.

Serious eye damage/irritation
May cause temporary discomfort. Mist may cause irritation.

Respiratory or skin sensitization
Not considered a skin nor respiratory sensitizer.

**Germ cell mutagenicity**
No available data indicates that this material is mutagenic or genotoxic.

**Carcinogenicity**
No evidence suggests this material is carcinogenic.

**Reproductive toxicity**
Not expected to cause reproductive or developmental effects.

**Summary of evaluation of the CMR properties**
Unavailable

**STOT-single exposure**
Not classified as an STOT-SE

**STOT-repeated exposure**
In rare cases, excessive and repeated exposure may cause issues with the central nervous system.

**Aspiration hazard**
Not an aspiration hazard.

**Additional information**
None available.

**SECTION 12: Ecological information**

**Toxicity**
Not classified as environmentally hazardous. Large or frequent spills may still have some damaging or harmful effects on the environment.

**Component 1**
EC50 - Daphnia magna (water flea) - >10000 mg/l - 48hrs
LC50 - Pimephales promelas (fathead minnow) - 710 mg/l - 96hrs

**Persistence and degradability**
Unavailable

**Bioaccumulative potential**
Partition coefficient n-octanol / water (log Kow): -0.92

**Mobility in soil**
Potential for mobility in soil is very high.

**Results of PBT and vPvB assessment**
Unavailable

**Other adverse effects**
None

**SECTION 13: Disposal considerations**
Disposal of the product
Dispose of in accordance with any and all applicable regulations.

Disposal of contaminated packaging
Contaminated packaging should be disposed of only in accordance with all applicable regulations.

Waste treatment
Dispose of waste material in accordance with local regulations regarding the disposal of waste material.

Sewage disposal
Dispose of in accordance with any and all applicable regulations.

Other disposal recommendations
None

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Pennsylvania Right To Know Components
Chemical name: 1,2-Propanediol
CAS number: 57-55-6

New Jersey Right To Know Components
Common name: PROPYLENE GLYCOL
CAS number: 57-55-6

15.2 Chemical Safety Assessment
N/A

NFPA Rating

SECTION 16: Other information
16.1 Further information/disclaimer
The information provided in this Safety Data Sheet is correct to the best of Duda Energy LLC's 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. This Safety Data Sheet only contains information relating to safety and does not replace any product information or product specification. Please note, the content may be changed, corrected, or deleted at any time without notice and may not always necessarily reflect the most current data. Duda Energy LLC will assume no responsibility for any trouble or failure caused by the errors in the information provided, nor any damage associated with the usage of the information.

16.2 Preparation information
Version: 2
Revised: 04-05-2017