

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

| | |
|---------------|---|
| Material name | SUPEROL KPO GLYCERIN USP, FCC, EP |
| Manufacturer | The Procter & Gamble Company Procter & Gamble Chemicals Sharon Woods Innovation Center 11530 Reed Hartman Highway Cincinnati, Ohio 45241 1-800-477-8899 or 1-513-626-6882 PGChemMSDS.IM@pg.com CHEMTREC: 1-800-424-9300 U.S. and Canada CHEMTREC: 1-703-527-3887 For calls originating elsewhere |
| Version # | 04 |
| Revision date | 02-11-2010 |
| CAS # | 56-81-5 |
| MSDS Number | GLYC301 |
| Product Code | 99318844 |
| Product use | Emulsifier, emollient, plasticizer, humectant, sweetener, anti-freeze, in surface coatings and paints, cosmetics, drug and food products. Intermediate for making glycerol derivatives. |
| Synonym(s) | Glycerol |

2. Hazards Identification

| | |
|---|---|
| Emergency overview | Harmful in contact with eyes. Prolonged exposure may cause chronic effects. |
| OSHA regulatory status Communication). | This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication). |
| Potential health effects | |
| Routes of exposure | Inhalation. Ingestion. Skin contact. Eye contact. |
| Eyes | Contact with eyes may cause irritation. |
| Skin dermatitis. | Frequent or prolonged contact may defat and dry the skin, leading to discomfort and Avoid contact with the skin. When it is heated, this material may cause thermal burns. |
| Inhalation | Avoid breathing dust/fume/gas/mist/vapors/spray. High mist concentrations may cause irritation of respiratory tract. |
| Ingestion | Components of the product may be absorbed into the body by ingestion. Do not ingest. Unlikely to be harmful unless excessive amount. |
| Specific hazards | No hazards resulting from the material as supplied. |
| Potential environmental effects | May cause long-term adverse effects in the environment. Product is biodegradable. |

3. Composition / Information on Ingredients

| Components | CAS # | Percent |
|------------------------|---------|---------|
| 1,2,3- PROPANETRIOL | 56-81-5 | 99-100 |

4. First Aid Measures

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First aid procedures

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Skin contact
persists.

Wash off with warm water and soap. Get medical attention if irritation develops and

Inhalation
breathing.

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for

Get medical attention, if needed.

| | |
|--------------------|---|
| Ingestion | Rinse mouth thoroughly. If ingestion of a large amount does occur, call a poison control center immediately. |
| Notes to physician | Symptoms may be delayed. |
| General advice | If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. Fire Fighting Measures

| | |
|--|---|
| Flammable properties | This product may react explosively when mixed with oxidizing agents |
| Extinguishing media | |
| Suitable extinguishing media | Water. Water spray. Foam. Dry powder. Carbon dioxide (CO2). |
| Special protective equipment for fire-fighters | Wear suitable protective equipment. |
| Specific methods | In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. |

6. Accidental Release Measures

| | |
|---------------------------|---|
| Personal precautions | Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. |
| Environmental precautions | Prevent further leakage or spillage if safe to do so. Do not contaminate water. |
| Methods for containment | ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. |
| Methods for cleaning up | Should not be released into the environment. Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. Never return spills in original containers for re-use. |

7. Handling and Storage

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| Handling | Use only with adequate ventilation. Wash thoroughly after handling. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not get this material in contact with eyes. Avoid contact with skin. Avoid prolonged exposure. Avoid release to the environment. |
| Storage | Keep away from heat, sparks and open flame. Store in a well-ventilated place. Keep container tightly closed. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Use care in handling/storage. |

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

| Material | Type | Value | Form |
|---|------|---------------|-------|
| SUPEROL KPO GLYCERIN USP, FCC, EP (56-81-5) | TWA | 10.0000 mg/m3 | Mist. |

U.S. - OSHA

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| Material | Type | Value | Form |
|---|------|---------------|----------------------|
| SUPEROL KPO GLYCERIN USP, FCC, EP (56-81-5) | PEL | 5.0000 mg/m3 | Respirable fraction. |
| | | 15.0000 mg/m3 | Total dust. |
| | TWA | 5.0000 mg/m3 | Respirable fraction. |
| | | 10.0000 mg/m3 | Total dust. |

Engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

| | |
|--------------------------------|--|
| Eye / face protection | Do not get in eyes. Chemical goggles are recommended. |
| Skin protection | Wear appropriate chemical resistant clothing. Chemical resistant gloves. |
| Respiratory protection | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. |
| General hygiene considerations | Do not get in eyes. Avoid contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice. |

9. Physical & Chemical Properties

Appearance

Clear.

Color Water

white.

Odor

Bland

Odor threshold Not

available.

Physical state Liquid.

Form Liquid.

pH Not

available. Melting point 68

°F (20 °C) Freezing point

Not available.

Boiling point > 554 °F (> 290 °C) 101.3232

kPa

Flash point > 390.2 °F (> 199 °C) Pensky-Martens

Closed Cup

Evaporation rate Not

available.

Flammability limits in air, upper, % by volume Not

Flammability limits in air, lower, % by volume available.

Not

available.

Vapor pressure 0.0025 mm Hg at 122 F (50 C)

Vapor density Not available.

Specific gravity Not available.

Relative density 126 at 68 F (20

C) Solubility (water) 100 %

Partition coefficient (n-octanol/water) -1.76

Auto-ignition temperature 739 °F (392.8 °C)

Decomposition temperature Not available. VOC

Not available.

Viscosity 1410 mPa·s at

20° C

10. Chemical Stability & Reactivity Information

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|----------------------------------|---|
| Chemical stability | Material is stable under normal conditions. |
| Conditions to avoid | Heat, flames and sparks. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). |
| Materials to avoid | Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). |
| Hazardous decomposition products | Irritants. Toxic gas. |
| Hazardous polymerization | Hazardous polymerization does not occur. |

11. Toxicological Information

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|------------------------------|---|
| Toxicological data | |
| Product | Test Results |
| 1,2,3-PROPANETRIOL (56-81-5) | Acute Oral LD50 Rat: ≥ 2 g/kg |
| Sensitization | Not available. |
| Local effects | Components of the product may be absorbed into the body through the skin. Contact may irritate or burn eyes. |

Chronic effects Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.

Prolonged exposure may cause chronic effects.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Skin corrosion/irritation Not available.

Mutagenicity Not available. Neurological effects

Not available. Reproductive effects

Not available. Teratogenicity

Not available.

Further information Symptoms may be delayed.

12. Ecological Information

Ecotoxicological data

| Product | Test Results |
|------------------------------|---|
| 1,2,3-PROPANETRIOL (56-81-5) | LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 51000 - 57000 mg/l 96.00 Hours |

* Estimates for product may be based on additional component data not shown.

Ecotoxicity Components of this product have been identified as having potential environmental concerns. Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Persistence / degradability Even though this product is readily biodegradable, it must not be indiscriminately discarded into the environment.

13. Disposal Considerations

Disposal instructions Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.

14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard

29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

CERCLA (Superfund) reportable quantity
None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes

Delayed Hazard - Yes

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Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance

No

Section 311 hazardous chemical

Yes

Inventory status

Country(s) or region

Inventory name

On inventory (yes/no)*

Australia

Australian Inventory of Chemical Substances

Yes

(AICS)

Yes

Canada

Domestic Substances List (DSL)

No

Canada

Non-Domestic Substances List

(NDSL)

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe (ELINCS) | European List of Notified Chemical Substances | Yes |
| Japan (ENCS) | Inventory of Existing and New Chemical Substances | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
 Contains no California Prop 65 chemicals.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

US - Pennsylvania RTK - Hazardous Substances: Listed substance
 1,2,3-PROPANETRIOL (CAS 56-81-5) Listed.

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
 Health: 1*
 Flammability: 1
 Physical hazard: 0

NFPA ratings
 Health: 1
 Flammability: 1
 Instability: 0

Disclaimer
 The submission of the MSDS may be required by law, but this is not an assertion that the substance is hazardous when used in accordance with proper safety practices and normal handling procedures. Data supplied are for use only in connection with occupational safety and health. The information contained herein has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. The information relates to the specific product designated herein, and does not relate to use in combination with any other material of any other process. Procter & Gamble assumes no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the controlled product.

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This data sheet contains changes from the previous version in section(s): This document has undergone significant changes and should be reviewed in its entirety