

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	MOON-OU USP/FCC
Version #	01
Revision date	06-10-2011
CAS #	56-81-5
MSDS Number	GLYC345
Product Code	99961024
Product use	Emulsifier, emollient, plasticizer, humectant, sweetener, anti-freeze, surface coatings, paints, and cosmetics. Intermediate for making glycerol derivatives.
Synonym(s)	GLYCEROL
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

2. Hazards Identification

OSHA regulatory status	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.
Skin	When it is heated, this material may cause thermal burns.
Inhalation	High mist concentrations may cause irritation of respiratory tract.
Ingestion	Unlikely to be harmful unless excessive amount.
Specific hazards	No hazards resulting from the material as supplied.
Potential environmental effects	Product is biodegradable.

3. Composition / Information on Ingredients

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

4. First Aid Measures

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.
Inhalation	Remove to fresh air.
Ingestion	Rinse mouth thoroughly. Drink plenty of water. If ingestion of a large amount does occur, call a poison control center immediately.

5. Fire Fighting Measures

Flammable properties	This product may react explosively when mixed with oxidizing agents.
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Extinguishing media	
Suitable extinguishing media	Water. Water spray. Foam. Dry powder. Carbon dioxide (CO2).
Protection of firefighters	
Protective equipment and precautions for firefighters	Wear suitable protective equipment.
Special protective equipment for fire-fighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.
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

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

US. ACGIH Threshold Limit Values

Material	Type	Value	Form
1,2,3-PROPANETRIOL (56-81-5)	TWA	10.0000 mg/m3	Mist.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value	Form
1,2,3-PROPANETRIOL (56-81-5)	PEL	15.0000 mg/m3	Total dust.
		5.0000 mg/m3	Respirable fraction.

Engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
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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.
Physical state	Liquid.
Form	Liquid.
Color	Water white.
Odor	Bland
Odor threshold	Not available.
pH	Not available.
Vapor pressure	<= 0.008 mm Hg at 68 F (20 C)
Boiling point	>= 550.4 °F (>= 288 °C) at 760 mm Hg (101.3232 kPa)
Melting point/Freezing point	68 °F (20 °C)
Solubility (water)	100 % Miscible
Relative density	1.262 at 25/25 C
Flash point	>= 390.2 °F (>= 199 °C) Pensky-Martens Closed Cup
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	739 °F (392.8 °C)
Viscosity	1300 mPa·s at 20° C
Partition coefficient (n-octanol/water)	-2.6
Other data	
Dynamic viscosity	954 mPa·s

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	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	Does not decompose up to 400° F (204° C). Thermal decomposition may release acrolein.
Hazardous polymerization	Hazardous polymerization does not occur.

11. Toxicological Information

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.
Partition coefficient	-2.6

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.
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14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	This product is not known to be 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.
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CERCLA/SARA Hazardous Substances - Not applicable.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2)

Not regulated

DEA Essential Chemical Code Number

Not regulated

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated

DEA Exempt Chemical Mixtures Code Number

Not regulated

CERCLA (Superfund) reportable quantity

None

