

**MATERIAL SAFETY DATA SHEET**

MSDS Number: GLYC301-5  
Supersedes: GLYC301-4

Revision Date: March 30, 2007  
Issue Date: September 01, 2005

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

• **Product identification**

Synonyms: Glycerol  
Trade Names: **Superox K Glycerin USP, FCC, EP**  
**Superox KNP Glycerin USP, FCC**  
**Superox Glycerin USP, FCC**  
**Superox K, EP**

• **Product uses**

Multiple uses including as emulsifier, emollient, plasticizer, humectant, sweetener, anti-freeze, in surface coatings and paints, cosmetics, drug and food products. Intermediate for making glycerol derivatives.

• **Company/undertaking identification**

North America: The Procter & Gamble Company  
Procter & Gamble Chemicals  
Sharon Woods Technical Center  
11530 Reed Hartman Highway  
Cincinnati, Ohio 45241

Department issuing MSDS: Product Safety and Regulatory Affairs  
1-800-477-8899

Europe: Procter & Gamble European Supply Company N.V.  
P&G Chemicals – Europe  
The Heights  
Brooklands  
Weybridge  
Surrey  
ENGLAND KT13 0XP  
Telephone Number: 01932-896000

- **Emergency Telephone:**
- |                                 |  |
|---------------------------------|--|
| P&G Ltd. - Brooklands, England: | Tel 01932-896000 (day phone)                   |
| CHEMTREC                        | Emergency 0191-279-2000 (day phone)            |
|                                 | 1-800-424-9300 U.S. and Canada                 |
|                                 | 1-703-527-3887 For calls originating elsewhere |
- Quality or Service Issues: Call Customer Service (US-day phone)  
1-800-477-8899 or 513-626-6882
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## **2. HAZARDS IDENTIFICATION**

European Hazard classification: This product is not classified as dangerous according to Directive 67/548/EEC.

- Potential Health Effects:
  - Eye - Concentrated solutions may cause mild transient irritation.
  - Skin - Unlikely to be irritant. Heated product may cause thermal burns if contacted.
  - Inhalation - Not applicable at ambient temperature. Glycerine mist may be irritative to respiratory tract.
  - Ingestion - Unlikely to be harmful unless excessive amount.
- Physical/Chemical Hazards: Contact of glycerine with strong oxidizing agents such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate may cause an explosion.
- Environmental Hazards: Product is biodegradable

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## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance/Preparation (mixture):** Substance

	<u>CAS No.</u>	<u>Wt/Wt %</u>	<u>EC-No.</u>	<u>EC Symbols</u>	<u>EC R-phrases</u>
1, 2, 3-Propanetriol	56-81-5	99 - 100	2002895	Not applicable	Not applicable

Occupational exposure limits, if applicable, are listed in Section 8

LC/LD50 information is listed in Section 11.

Full text of R phrase(s) are listed in section 16.

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## **4. FIRST AID MEASURES**

- Eye - Immediately flush with copious amounts of water. Get medical attention if irritation persists.
  - Skin - Wash thoroughly with plenty of water and soap.
  - Inhalation - Remove to fresh air.
  - Ingestion - Remove material from mouth. Drink plenty of water. If large amount swallowed or symptoms develop get medical attention.
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## **5. FIRE FIGHTING MEASURES**

- Extinguishing media: Use water, alcohol resistant foam, CO<sub>2</sub> or dry chemical.
- Unsuitable extinguishing media: Not applicable
- Flash Point and method: >390° F (198.9° C) PMCC
- Explosive limits in air: Not applicable
- Auto-ignition temperature: ~752° F (~400° C)
- Sensitivity to mechanical impact/static discharge: Not available
- Special Protective Equipment: Wear self-contained breathing apparatus and full protective clothing.
- Other Fire Fighting Considerations: Contact of glycerine with strong oxidizing agents such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate may cause an explosion.
- Exposure hazards: During burning poisonous acrolein may be formed.

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## **6. ACCIDENTAL RELEASE MEASURES**

- Personal Precautions: Wear respirator, suitable gloves and eye/face protection.
- Environmental Precautions: Minimize contamination of drains, surface and ground waters.
- Procedures for Spill/Leak Clean-up: Transfer product to suitably labeled containers for disposal at an approved site. Absorb liquid spillage onto inert material (e.g. sand). Residues and small spillages may be washed away with water and detergent.

Refer to Section 8 for additional personal protection information.

Refer to Section 13 for disposal considerations.

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## **7. HANDLING AND STORAGE**

- Handling: No special precautions required, but avoid eye and skin contact as part of normal industrial hygiene. Prevent formation of mist. Eye and skin contact should be avoided if handling at elevated temperatures.
- Storage: Store in clean tight containers to prevent moisture pickup from air. Can be stored in aluminum, stainless steel, fiberglass or resin lined steel vessels.
- Other Recommendations: Avoid contact with strong oxidizing agents such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate.

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## **7. HANDLING AND STORAGE - CONTINUED**

- Specific use(s): Follow bulk handling and storage procedures as noted above.

Refer to Section 6 for clean-up of spillages.

Refer to Section 13 for disposal considerations.

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## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- General Precautions: Good industrial hygiene should be followed. Avoid breathing mist.

- Exposure Limit Values - glycerine:

Australia – TWA 10 mg/m<sup>3</sup>

Belgium - TWA 10 mg/m<sup>3</sup>

Canada:

Alberta – TWA 10 mg/m<sup>3</sup>

British Columbia – TWA 10 mg/m<sup>3</sup>

Ontario – TWA 10 mg/m<sup>3</sup>

Quebec – TWA 10 mg/m<sup>3</sup>

France – TWA (VME) 10 mg/m<sup>3</sup>

Finland – 8 hour limit 20 mg/m<sup>3</sup>

Ireland – 8 hour OEL (TWA) 10 mg/m<sup>3</sup>

Italy – 8 hour TWA 10 mg/m<sup>3</sup>

Korea – TWA 10 mg/m<sup>3</sup>

Malaysia – TWA 10 mg/m<sup>3</sup>

Mexico – TWA 10 mg/m<sup>3</sup>

New Zealand – TWA 10 mg/m<sup>3</sup>

Singapore – 8-hour PEL (TWA) 10 mg/m<sup>3</sup>

Spain – 8 hour daily exposure limit (VLA-ED) 10 mg/m<sup>3</sup>

The Netherlands – MAC TWA (TGG) 10 mg/m<sup>3</sup>

United Kingdom – TWA 10 mg/m<sup>3</sup>

United States – ACGIH – Glycerine mist - TLV-TWA 10 mg/m<sup>3</sup>

OSHA Z-1 PEL Glycerine mist, respirable fraction - 5 mg/m<sup>3</sup>

OSHA Z-1 PEL Glycerine mist, total dust - 15 mg/m<sup>3</sup>

- Exposure Controls:

Engineering Controls: Ventilation: Local exhaust - preferred  
Mechanical (general) acceptable  
Provide ventilation to meet exposure limits.

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## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION - CONTINUED**

Personal Protective Equipment:

Eye - None required, although eye protection is recommended as part of good industrial hygiene.

Skin - Protective gloves: None required with normal use.

Inhalation - An appropriate NIOSH/MSHA approved respirator should be used if a mist or vapor is generated. A NIOSH/MSHA approved self-contained breathing apparatus or air-supplied respirator is recommended if the concentration exceeds the capacity of cartridge respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Other Controls: None required.

- Environmental Exposure Controls: Contact Procter and Gamble for specific Community information.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

- General Information:

Physical State: Liquid

Appearance: Water white, clear

Odor: Bland odor; sweet taste

Odor Threshold: Not available

- Important health, safety and environmental information:

pH: Neutral

Boiling point/Boiling range: > 554° F (290° C) @ 760 mm Hg (101.3kPa)

Flash Point & Method: >390 °F (198.9 °C) PMCC

Flammability (solid, gas): Not available

Explosive properties: Not to be expected

Oxidising properties: Not to be expected

Vapor pressure: .0025 mmHg @ 122° F (50° C)

Relative density: 1.26 @ 68° F (20° C)

Freezing point: Not available

Melting Point: ~64.4° F (~18° C) (solidifies at a much lower temperature)

Solubility:

Water solubility: Complete @ 72° F (22.2 ° C)

Fat solubility (solvent-oil to be specified): Miscible with ethanol

Slightly soluble in acetone

Insoluble in ether and in chloroform

Partition coefficient (Log Pow) (calculated): -1.76

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## **9. PHYSICAL AND CHEMICAL PROPERTIES - CONTINUED**

Viscosity: 1410 mPa.s at (68° F) 20° C  
Vapor density: Not available  
Evaporation Rate (nBuOAc=1): Not available  
Explosive Limits: Not applicable  
Auto ignition temperature: ~739.4° F (393° C)  
Coefficient of water/oil distribution: Not available

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## **10. STABILITY AND REACTIVITY**

- Stability: Stable under normal operational procedures.
- Conditions to Avoid: None identified.
- Materials to Avoid: Contact of glycerine with strong oxidizing agents such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate may cause an explosion.
- Hazardous Decomposition Products: Does not decompose up to 204° C (400° F)  
Thermal decomposition may release acrolein.
- Hazardous Polymerization: No hazardous polymerization reactions.

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## **11. TOXICOLOGICAL INFORMATION**

### IRRITATION DATA

Skin, rabbit	Not irritating
Eye, rabbit	Not irritating

### TOXICITY DATA

LD <sub>50</sub> oral, rat	>2 g/kg
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## **12. ECOLOGICAL INFORMATION**

- Ecotoxicity:

Carassius auratus (Goldfish)	24h LC <sub>50</sub> >5,000 mg/L
Leuciscus idus (Golden Orfe)	48h LC <sub>0</sub> >250 mg/L
Oncorhynchus mykiss (Rainbow trout)	96h LC <sub>100</sub> = 51,000 – 57,000 mg/L
Daphnia magna	24h EC <sub>50</sub> >10,000 mg/L
Daphnia magna	24h EC <sub>0</sub> >500 mg/L
- Microorganisms

Chlimonas paramaecium	48h NOEC >10,000 mg/L
Entosiphon sulcatum	72h NOEC 3200 mg/L

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## **12. ECOLOGICAL INFORMATION - CONTINUED**

Pseudomonas putida	16h NOEC >10,000 mg/L
Uronema parduzci	20h NOEC >10,000 mg/L

### Algae

Microcystis aeruginosa	8d NOEC 2900 mg/L
Scenedesmus quadricauda	8d EC0 >10,000 mg/L

- **Mobility:**  
Low potential for sorption to soil. Glycerol will partition primarily to water.
- **Persistence and degradability:**  
Readily biodegradable (OECD 301)
- **Bioaccumulative potential:**  
BCF: 3.162 (calculated)

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## **13. DISPOSAL CONSIDERATIONS**

DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH ALL FEDERAL, STATE/PROVINCIAL AND LOCAL REGULATIONS. Do not dispose of via sinks, drains or into the immediate environment.

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## **14. TRANSPORT INFORMATION**

**U.S. DOT:** Not regulated for transport  
Not classified in RID/ADR – IMDG – ICAO/IATA

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## **15. ADDITIONAL REGULATORY INFORMATION**

**INVENTORY STATUS:** TSCA, EINECS, DSL, JAPAN, AUSTR, PHIL, CHINA, KOREA, New Zealand, Switzerland

WGK water endangering class: 1, low hazard to water

### **EU Classification**

This product is not classified as dangerous according to Directive 67/548/EEC.

### **Canada**

#### **HAZARDOUS INGREDIENTS – WHMIS (Canadian Workplace Hazardous Materials Information System)**

This product when tested as a whole is not a controlled substance within the meaning of the Hazardous Products Act.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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**16. OTHER INFORMATION**

**EUROPE**

This product safety data sheet was prepared in compliance with Directive 2001/58/EC

References: BIBRA toxicity profile (1987). Glycerol.

OECD SIDS Initial Assessment Report for SIAM 14, February 2002

The following sections contain revisions or new statements: 2-3, 9, 16.

Department issuing MSDS: Product Safety and Regulatory Affairs 1-800-477-8899

**DISCLAIMER:** This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

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