

Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No.1907/2006

Date / Revised: 15.02.2008

Product: **1,2-PROPYLENE GLYCOL USP**

Version: 6.0

(30054515/SDS_GEN_GB/EN)

Date of print 03.03.2008

1. Substance/preparation and company identification

1,2-PROPYLENE GLYCOL USP

Use: Chemical

Company:

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2. Hazard identification

No particular hazards known.

3. Composition/information on ingredients

Chemical nature

propane-1,2-diol

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CAS Number: 57-55-6
EC-Number: 200-338-0

4. First-aid measures

General advice:

Remove contaminated clothing.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink plenty of water.

Note to physician:

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-fighting measures

Suitable extinguishing media:

carbon dioxide, dry extinguishing media, water spray, alcohol-resistant foam

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions:

Handle in accordance with good industrial hygiene and safety practice.

Environmental precautions:

Do not empty into drains.

Methods for cleaning up or taking up:

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations.

7. Handling and storage

Handling

Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:

Take precautionary measures against static discharges.

Storage

Suitable materials for containers: aluminum, Stainless steel 1.4439, High density polyethylene (HDPE), light-impervious

Unsuitable materials for containers: zinc

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Protect from air. Protect from atmospheric humidity. Protect contents from the effects of light.

Storage stability:

Storage temperature: < 40 °C

The stated storage temperature should be noted.

Storage duration: 12 Months

8. Exposure controls and personal protection

Components with workplace control parameters

57-55-6: propane-1,2-diol

TWA value 10 mg/m³ (EH40 (UK))

TWA value 474 mg/m³ ; 150 ppm (EH40 (UK))

Personal protective equipment

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other. Manufacturer's directions for use should be observed because of great diversity of types.

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

light protective clothing

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General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

| | | |
|---|---|--------------------------|
| Form: | liquid | |
| Colour: | colourless | |
| Odour: | slight odour almost odourless | |
| pH value: | 6 | |
| Melting point: | -60 °C | |
| Boiling range: | 186 - 190 °C (1,013 mbar) | |
| Flash point: | 103 °C | (DIN 51758) |
| Lower explosion limit: | 2.6 %(V) | |
| Upper explosion limit: | 12.6 %(V) | |
| Ignition temperature: | 410 °C | (DIN 51794) |
| Explosion hazard: | not explosive | (other) |
| Fire promoting properties: | not fire-propagating | (other) |
| Vapour pressure: | 0.186 mbar (20 °C) 1.75 mbar (50 °C) | |
| Density: | 1.036 g/cm ³ (20 °C) | (DIN 51757) |
| Bulk density: | No data available. | |
| Solubility in water: | fully soluble (20 °C) | |
| Solubility (qualitative) solvent(s): | polar solvents soluble | |
| Partitioning coefficient n-octanol/water (log Pow): | -0.78 | (Calculation Hansch/Leo) |
| Viscosity, dynamic: | 60.5 mPa.s (20 °C) | |

10. Stability and reactivity

Conditions to avoid:
> 40 °C
Avoid humidity. Avoid daylight. Disregard of the conditions mentioned may result in undesirable decomposition reactions.

Substances to avoid:
zinc, strong oxidizing agents

Hazardous reactions:
No hazardous reactions if stored and handled as prescribed/indicated.

Possible decomposition products:
carbonyl compounds, Dioxolan derivatives

11. Toxicological information

Acute toxicity

Assessment of acute toxicity:
| Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

| LD50 rat (oral): > 10,400 mg/kg

| LD50 rabbit (dermal): 20,800 mg/kg
| Literature data.

Irritation

Assessment of irritating effects:
| Not irritating to the skin. Not irritating to the eyes.

| Primary skin irritation rabbit: non-irritant (Draize test)

| Primary irritations of the mucous membrane rabbit: non-irritant (OECD Guideline 405)
| Literature data.

Sensitization

Assessment of sensitization:
| Skin sensitizing effects were not observed in animal studies.

| Guinea pig maximization test guinea pig: Non-sensitizing.
| Literature data.

Repeated dose toxicity

Assessment of repeated dose toxicity:
No substance-specific organotoxicity was observed after repeated administration of high doses to animals.

Genetic toxicity

Assessment of mutagenicity:
| No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in studies with mammals.

Carcinogenicity

Assessment of carcinogenicity:

| The results of various animal studies gave no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity:

| The results of animal studies gave no indication of a fertility impairing effect.

12. Ecological information

Ecotoxicity

Assessment of aquatic toxicity:

| Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. There is a high probability that the product is not acutely harmful to aquatic organisms.

Toxicity to fish:

LC50 (96 h) 46,500 mg/l, *Pimephales promelas* (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

Aquatic invertebrates:

EC50 (48 h) 43,500 mg/l, *Daphnia magna* (OECD Guideline 202, part 1)

| EC50 (48 h) approx. 27,300 mg/l, *Mysidopsis bahia*

Aquatic plants:

EC50 (72 h) 24,200 mg/l (growth rate), *Selenastrum capricornutum* (OECD Guideline 201)

EC50 (72 h) 19,300 mg/l (growth rate), *Skeletonema costatum* (OECD Guideline 201)

Microorganisms/Effect on activated sludge:

EC50 (0.5 h) > 1,000 mg/l, activated sludge (OECD Guideline 209, aquatic)

Chronic toxicity to aquatic invertebrates:

| No observed effect concentration (7 d), 13,020 mg/l, *Ceriodaphnia* sp.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

| Readily biodegradable (according to OECD criteria).

Elimination information:

| 90 - 100 % DOC reduction (8 d) (OECD 301 A (new version)) (aerobic, activated sludge, domestic)

Bioaccumulation potential

Bioaccumulation potential:

| Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Additional information

Other ecotoxicological advice:
Do not release untreated into natural waters.

13. Disposal considerations

Must be dumped or incinerated in accordance with local regulations.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

Contaminated packaging:
Uncontaminated packaging can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport information

Land transport

ADR

Not classified as a dangerous good under transport regulations

RID

Not classified as a dangerous good under transport regulations

Inland waterway transport

ADNR

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

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15. Regulatory information

Regulations of the European union (Labelling) / National legislation/Regulations

EC-Number: 200-338-0

as in Annex VI of Directive 67/548/EEC:

The product does not require a hazard warning label in accordance with EC Directives.

Other regulations

Self classification

The product does not require a hazard warning label in accordance with EC Directives.

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

16. Other information

Vertical lines in the left hand margin indicate an amendment from the previous version.

If you have any queries relating to this MSDS, its contents or any other product safety related questions, please write to the following e-mail address: product-safety-north@basf.com

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.