1. Identification

Product identifier

GLYTHERM® P44 colorless

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Specialty fluid for the chemical industry

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Fuel and Lubricant Solutions

Telephone: +49 621 60-42178
E-mail address: RegXcellenceFuelLubes@basf.com

Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Repr. 1B (fertility)
Repr. 1B (unborn child)

For the classifications not written out in full in this section the full text can be found in section 16.
Label elements

Globally Harmonized System (GHS)

Pictogram:

Signal Word:
Danger

Hazard Statement:
H360 May damage fertility. May damage the unborn child.

Precautionary Statements (Prevention):
P280 Wear protective gloves, protective clothing and eye protection or face protection.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):
P308 + P313 IF exposed or concerned: Get medical attention.

Precautionary Statements (Storage):
P405 Store locked up.

Precautionary Statements (Disposal):
P501 Dispose of contents and container to hazardous or special waste collection point.

According to UN GHS criteria

Hazard determining component(s) for labelling: Disodium tetraborate, anhydrous

Other hazards

According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

3. Composition/Information on Ingredients

Substances
Not applicable

**Mixtures**

**Chemical nature**

Propane-1,2-diol inhibitors

**Hazardous ingredients (GHS)**

According to UN GHS criteria

- Sodium benzoate
  - Content (W/W): \( \geq 1\% - < 3\% \)
  - CAS Number: 532-32-1
  - EC-Number: 208-534-8
  - Acute Tox. 5 (oral)
  - Eye Dam./Irrit. 2A
  - H319, H303

- Potassium hydroxide
  - Content (W/W): \( \geq 0.2\% - < 0.3\% \)
  - CAS Number: 1310-58-3
  - EC-Number: 215-181-3
  - INDEX-Number: 019-002-00-8
  - Met. Corr. 1
  - Acute Tox. 4 (oral)
  - Skin Corr./Irrit. 1A
  - Eye Dam./Irrit. 1
  - H290, H302, H314

  **Specific concentration limit:**
  - Skin Corr./Irrit. 2: \( 0.5 - < 2\% \)
  - Eye Dam./Irrit. 2: \( 0.5 - < 2\% \)
  - Skin Corr./Irrit. 1A: \( \geq 5\% \)
  - Skin Corr./Irrit. 1B: \( 2 - < 5\% \)

- Disodium tetraborate, anhydrous
  - Content (W/W): \( \geq 0.3\% - < 1\% \)
  - CAS Number: 1330-43-4
  - EC-Number: 215-540-4
  - INDEX-Number: 005-011-00-4
  - Eye Dam./Irrit. 2A
  - Repr. 1B (fertility)
  - Repr. 1B (unborn child)
  - H319, H360

For the classifications not written out in full in this section the full text can be found in section 16.

**4. First-Aid Measures**

**Description of first aid measures**

Immediately remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). First aid personnel should pay attention to their own safety.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:
Immediately wash thoroughly with soap and water, seek medical attention.

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

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

**Most important symptoms and effects, both acute and delayed**
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

**Indication of any immediate medical attention and special treatment needed**
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

### 5. Fire-Fighting Measures

**Extinguishing media**
Suitable extinguishing media:
water spray, dry powder, alcohol-resistant foam

**Special hazards arising from the substance or mixture**
harmful vapours
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

**Advice for fire-fighters**
Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

### 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures**
Use personal protective clothing. Breathing protection required.

**Environmental precautions**
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

**Methods and material for containment and cleaning up**
For large amounts: Pump off product.
For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.
7. Handling and Storage

Precautions for safe handling
No special measures necessary provided product is used correctly.

Protection against fire and explosion:
Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities
Unsuitable materials for containers: Paper/Fibreboard
Further information on storage conditions: Containers should be stored tightly sealed in a dry place.
Storage in galvanized containers is not recommended.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

57-55-6: Propane-1,2-diol
532-32-1: Sodium benzoate
1310-58-3: Potassium hydroxide
1330-43-4: Disodium tetraborate, anhydrous

Exposure controls

Personal protective equipment

Respiratory protection:
Suitable respiratory protection for lower concentrations or short-term effect: Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e.g. EN 14387 Type A)

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN ISO 374-1)
butyl rubber (butyl) - 0.7 mm coating thickness
nitrile rubber (NBR) - 0.4 mm coating thickness
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. Manufacturer's directions for use should be observed because of great diversity of types.

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

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
Wearing of closed work clothing is required additionally to the stated personal protection equipment. No eating, drinking, smoking or tobacco use at the place of work. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form: liquid
Colour: colourless
Odour: almost odourless
Odour threshold: not determined
pH value: 6.5 - 8.5 (500 g/l, 20 °C) (ASTM D1287)
solidification temperature: < -50 °C (DIN 51583)
boiling temperature: > 150 °C (ASTM D1120)
Flash point: approx. 109 °C (ISO 2719)
Evaporation rate: not determined
Flammability: hardly combustible (derived from flash point)
Lower explosion limit: 2.6 % (V)
Upper explosion limit: 12.6 % (V)
Ignition temperature: 480 °C (DIN 51794)
Vapour pressure: 0.2 hPa
(20 °C) 1.7 hPa
(50 °C)
Density: 1.06 g/cm³
(20 °C) (DIN 51757)
Relative vapour density (air): > 1
(20 °C) (estimated)
Solubility in water: fully soluble
Solubility (qualitative) solvent(s): polar solvents
Partitioning coefficient n-octanol/water (log Kow): study scientifically not justified.
Self ignition: not self-igniting
Thermal decomposition: No decomposition if correctly stored and handled.
Viscosity, kinematic: approx. 70 mm²/s
(20 °C) (DIN 51562)
Explosion hazard: not explosive
Fire promoting properties: not fire-propagating

Other information

Miscibility with water: miscible in all proportions
Grain size distribution: The substance / product is marketed or used in a non solid or granular form.
Other Information: If necessary, information on other physical and chemical parameters is indicated in this section.
10. Stability and Reactivity

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

Corrosion to metals: No corrosive effect on metal.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
No hazardous reactions when stored and handled according to instructions.

Conditions to avoid
Avoid open flames.

Incompatible materials
Substances to avoid:
strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products:
No hazardous decomposition products known.

11. Toxicological Information

Information on toxicological effects

Acute toxicity
Assessment of acute toxicity:
Virtually nontoxic after a single ingestion.

Irritation
Assessment of irritating effects:
Not irritating to eyes and skin.

Respiratory/Skin sensitization
Assessment of sensitization:
Based on available data, the classification criteria are not met.

Germ cell mutagenicity
Assessment of mutagenicity:
Based on the ingredients, there is no suspicion of a mutagenic effect.
Carcinogenicity

Assessment of carcinogenicity:
The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity:
Contains a component that causes reproductive toxicity in test animals.

*Information on: Disodium tetraborate, anhydrous
Assessment of reproduction toxicity:
*Causes impairment of fertility in laboratory animals.*

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Developmental toxicity

Assessment of teratogenicity:
Contains a component that causes teratogenicity in test animals.

*Information on: Disodium tetraborate, anhydrous
Assessment of teratogenicity:
The substance caused malformations/developmental toxicity in laboratory animals.*

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Specific target organ toxicity (single exposure)

Remarks: Based on available data, the classification criteria are not met.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
Based on available data, the classification criteria are not met.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

The product has not been tested. The statement has been derived from the properties of the individual components.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms.

Microorganisms/Effect on activated sludge:
Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.
Persistence and degradability

Elimination information:
> 70 % DOC reduction (28 d) (OECD 301 A (new version)) Readily biodegradable.

Bioaccumulative potential

Assessment bioaccumulation potential:
Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments:
Volutility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Other ecotoxicological advice:
Do not release untreated into natural waters. The product has not been tested. The statement has been derived from the properties of the individual components.

13. Disposal Considerations

Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

Waste key:
16 01 14= antifreeze fluids containing hazardous substances
Waste code (regional specific)(Austria):
55373 other non-halogenated organic solvents

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**

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**RID**

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**Inland waterway transport**

**ADN**

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**Transport in inland waterway vessel**

Not evaluated

**Sea transport**

**IMDG**

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</table>
Air transport

IATA/ICAO

UN number or ID number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Not applicable

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Repr. Reproductive toxicity
Acute Tox. Acute toxicity
Eye Dam./Irrit. Serious eye damage/eye irritation
Met. Corr. Corrosive to metals
Skin Corr./Irrit. Skin corrosion/irritation
H319 Causes serious eye irritation.
H303 May be harmful if swallowed.
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H360 May damage fertility. May damage the unborn child.

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. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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