

# Material Safety Data Sheet

## Sasfroth 200

Version 1.00

Revision Date 21.07.2005



### 1. Identification of the substance/preparation and of the company/undertaking

Trade name	Sasfroth 200
Company	Hitech Chemicals

### 2. Composition/information on ingredients

#### Preparation on the base:

**2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol**

content:  $\geq 70.00$  -  $< 80.00$  %

CAS-No. 143-22-6  
Symbol(s) Xi

Index-No. 603-183-00-0  
R-phrase(s) -R41

EG-Nr.: 205-592-6

**2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether**

content:  $\geq 12.50$  -  $< 20.00$  %

CAS-No. 112-34-5  
Symbol(s) Xi

Index-No. 603-096-00-8  
R-phrase(s) -R36

EG-Nr.: 203-961-6

**3,6,9,12-Tetraoxahexadecan-1-ol**

content:  $\geq 20.00$  -  $\leq 30.00$  %

CAS-No. 1559-34-8  
Symbol(s)

Index-No.  
R-phrase(s)

EG-Nr.: 216-322-1

For the full text of the R phrases mentioned in this Section, see Section 16.

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### 3. Hazards identification

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#### Identification of the risks

R41 Risk of serious damage to eyes.

### 4. First aid measures

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<b>General advice</b>	<i>If you feel unwell, seek medical advice (show the label where possible). Take off contaminated clothing and shoes immediately.</i>
<b>Inhalation</b>	<i>Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. Consult a physician.</i>
<b>Skin contact</b>	<i>Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician.</i>
<b>Eye contact</b>	<i>Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Call a physician immediately.</i>
<b>Ingestion</b>	<i>Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.</i>

### 5. Fire-fighting measures

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<b>Suitable extinguishing media</b>	<i>water spray, dry powder, foam, carbon dioxide (CO2)</i>
<b>Further information</b>	<i>In the event of fire, cool tanks with water spray.</i>

### 6. Accidental release measures

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<b>Personal precautions</b>	<i>Use personal protective equipment.</i>
<b>Environmental precautions</b>	<i>Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.</i>
<b>Methods for cleaning up</b>	<i>Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). The material taken up must be disposed of in accordance with regulations.</i>

### 7. Handling and storage

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#### Handling

Print Date 17.08.2005

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**Safe handling advice**      *Wear personal protective equipment. Avoid contact with skin and eyes.*

**Advice on protection against fire and explosion**      *No special protective measures against fire required.*

### Storage

**Requirements for storage areas and containers**      *Keep containers tightly closed in a cool, well-ventilated place.*

**container material**      *unsuitable materials: light metals*

## 8. Exposure controls / personal protection

### Components with workplace control parameters

#### NATIONAL OCCUPATIONAL EXPOSURE LIMITS

*no data available*

#### EUROPEAN OCCUPATIONAL EXPOSURE LIMITS

*no data available*

### Engineering measures

*Provide sufficient air exchange and/or exhaust in work rooms.*

### Personal protective equipment

**Respiratory protection**      *No personal respiratory protective equipment normally required. In case of insufficient ventilation wear suitable respiratory equipment.*

**Hand protection**      *gloves suitable for permanent contact:  
Material: nitrile rubber/nitrile latex  
Break through time:  $\geq$  480 min  
Material thickness: 0.35 mm  
Material: butyl-rubber  
Break through time:  $\geq$  480 min  
Material thickness: 0.5 mm  
gloves suitable for splash protection:  
Material: natural rubber/natural latex  
Break through time:  $\geq$  120 min  
Material thickness: 0.5 mm*

*unsuitable gloves  
Material: polychloroprene*

**Eye protection**      *safety glasses with side-shields*

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<b>Skin and body protection</b>	<i>protective suit</i>
<b>Hygiene measures</b>	<i>Avoid contact with eyes. Keep away from food, drink and animal feedingstuffs. Wear suitable gloves and eye/face protection. Handle in accordance with good industrial hygiene and safety practice for diagnostics.</i>
<b>Protective measures</b>	<i>Wear suitable protective equipment.</i>

### 9. Physical and chemical properties

<b>Form</b>	<i>liquid</i>
<b>Colour</b>	<i>colourless</i>
<b>Odour</b>	<i>mild</i>
<b>pH</b>	<i>7; neutral</i>
<b>Melting point/range</b>	<i>-43 °C; 1,013 hPa</i>
<b>Boiling point/range</b>	
<b>Flash point</b>	<i>138 °C</i>
<b>Ignition temperature</b>	<i>no data available</i>
<b>Lower explosion limit</b>	<i>no data available</i>
<b>Upper explosion limit</b>	<i>no data available</i>
<b>Vapour pressure</b>	<i>21.2 hPa; 20 °C</i>
<b>Density</b>	<i>0.992 g/cm<sup>3</sup>; 20 °C</i>
<b>Bulk density</b>	<i>0.992 kg/m<sup>3</sup>; 20 °C</i>
<b>Water solubility</b>	<i>completely soluble</i>
<b>Partition coefficient (n-octanol/water)</b>	<i>no data available</i>
<b>Solubility in other solvents</b>	<i>Medium: Diethylether; completely soluble</i>
<b>Viscosity, dynamic</b>	<i>9.7 mPa.s; 20 °C</i>
<b>Viscosity, kinematic</b>	<i>no data available</i>
<b>Relative vapour density</b>	<i>no data available</i>

### 10. Stability and reactivity

<b>Materials to avoid</b>	<i>oxidizing agents, reducing agents, acids and bases</i>
<b>Hazardous decomposition products</b>	<i>No decomposition if stored normally.</i>
<b>Further information</b>	<i>Formation of peroxides may occur</i>

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### 11. Toxicological information

<b>Acute oral toxicity</b>	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol: LD50 rat: > 2,000 mg/kg; (literature value)  2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: LD50 rat: > 2,000 mg/kg; (literature value)  3,6,9,12-Tetraoxahexadecan-1-ol: LD50 rat: > 2,000 mg/kg; (literature value)
<b>Acute dermal toxicity</b>	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol: LD50 rabbit: > 2,000 mg/kg; (literature value)  2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: LD50 rabbit: > 2,000 mg/kg; (literature value)  3,6,9,12-Tetraoxahexadecan-1-ol: LD50 rabbit: > 2,000 mg/kg; (literature value)
<b>Skin irritation</b>	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol: rabbit: not irritating; Draize Test; (literature value)  2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: rabbit: slightly irritating; (literature value)  3,6,9,12-Tetraoxahexadecan-1-ol: rabbit: slightly irritating; (literature value)
<b>Eye irritation</b>	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol: rabbit: Risk of serious damage to eyes.; (literature value)  2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: rabbit: highly irritating; (literature value)  3,6,9,12-Tetraoxahexadecan-1-ol: rabbit: slightly irritating; (literature value)
<b>Sensitization</b>	2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: Maximisation Test guinea pig: not sensitizing; (literature value)
<b>Genotoxicity in vitro</b>	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol: Ames test: not mutagenic; (literature value)  2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: Ames test: not mutagenic; (literature value)

### 12. Ecological information

<b>Biodegradability</b>	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol:
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*Rapidly biodegradable.; > 70 %; 21 d; OECD Guideline 301 E; (literature value)*

*2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: Rapidly biodegradable.; > 70 %; 28 d; OECD Guideline 301 E; (literature value)*

*2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: Rapidly biodegradable.; 100 %; 28 d; (literature value)*

*3,6,9,12-Tetraoxahexadecan-1-ol: < 60 %; 28 d; OECD Guideline 301 B(literature value)*

### Ecotoxicity effects

#### Toxicity to fish

*2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol: LC50 *Poecilia reticulata*: > 100 mg/l; (literature value)*

*2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: LC50 *Leuciscus idus*: > 100 mg/l; (literature value)*

*3,6,9,12-Tetraoxahexadecan-1-ol: LC50 *Salmo gairdneri*: > 100 mg/l; 96 h; (literature value)*

#### Toxicity to daphnia

*2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol: EC50 *Daphnia magna*: > 100 mg/l; 24 h; (literature value)*

*2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: EC50 *Daphnia magna*: > 100 mg/l; 48 h; (literature value)*

*3,6,9,12-Tetraoxahexadecan-1-ol: EC50 *Daphnia magna*: > 100 mg/l; 24 h; (literature value)*

#### Toxicity to algae

*2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutyl ether; butoxytriethylene glycol: *scenedesmus subspicatus*: > 100 mg/l; 72 h; (literature value)*

*2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: EC50 *scenedesmus subspicatus*: > 100 mg/l; (literature value)*

*3,6,9,12-Tetraoxahexadecan-1-ol: EC50 *selenastrum capricornutum*: > 100 mg/l; 96 h; (literature value)*

### 13. Disposal considerations

**Product** *In accordance with local and national regulations.*

**Contaminated packaging** *Packaging that cannot be cleaned must be disposed of in the same way as the material itself.*

### 14. Transport information



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**Further Information**      *Not classified as dangerous in the meaning of transport regulations.*

### 15. Regulatory information

#### Labelling

**Regulatory base**                      1999/45/EC  
**Symbol(s)**                              Xi: Irritant  
**R-phrase(s)**                            R41: Risk of serious damage to eyes.  
**S-phrase(s)**                            S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
    S39: Wear eye/face protection.  
    S60: This material and its container must be disposed of as hazardous waste.

### 16. Other information

*Full text of R-phrases referred to under sections 2 and 3:*

R36    Irritating to eyes.  
R41    Risk of serious damage to eyes.

*This MSDS summarises at the date of issue our best knowledge of the health, safety and environmental hazard information related to the product, and in particular how to safely handle, use, store and transport the product in the workplace. Since we cannot anticipate or control conditions under which the product may be handled, used, stored or transported, each user must, prior to usage, review this MSDS in the context of how the user intends to handle, use, store or transport the product in the workplace and beyond, and communicate such information to all relevant parties. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.*

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