

SAFETY DATA SHEET

EUROLUB DOT4 LS.6

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

REACH Registration notes This material is a mixture. All components have been registered under REACH by the Manufacturer or Supplier.

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

Identified uses Automobilindustrie

1.3. Details of the supplier of the safety data sheet

Supplier EUROLUB GmbH
Freisinger Strasse 25-27
85386 Eching
info@eurolub.com
www.eurolub.com
+49(0)8165/9591-0
+49(0)8165/9591-20

Contact Person

1.4. Emergency telephone number

Während den Geschäftszeiten Tel. +49(0)8165/9591-0

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

| | |
|-------------------------------|-------------------|
| Physical and Chemical Hazards | Not classified. |
| Human health | Eye Dam. 1 - H318 |
| Environment | Not classified. |

Classification (1999/45/EEC)

Xi;R41.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008



Signal Word Danger

Hazard Statements

H318 Causes serious eye damage.

Precautionary Statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplementary Precautionary Statements

P310 Immediately call a POISON CENTER or doctor/physician.

2.3. Other hazards

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Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

| | | |
|--|--|--|
| 2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL | | 30-40% |
| CAS-No.: 143-22-6 | EC No.: 205-592-6 | Registration Number: 01-2119475107-38-xxxx |
| Classification (EC 1272/2008) Eye Dam. 1 - H318 | Classification (67/548/EEC) Xi;R41 | |
| 2-(2-BUTOXYETHOXY)ETHANOL | | 5-10% |
| CAS-No.: 112-34-5 | EC No.: 203-961-6 | Registration Number: 01-2119475104-44-xxxx |
| Classification (EC 1272/2008) Eye Irrit. 2 - H319 | Classification (67/548/EEC) Xi;R36 | |
| 2-(2-METHOXYETHOXY)ETHANOL | | 0.1-1.0% |
| CAS-No.: 111-77-3 | EC No.: 203-906-6 | Registration Number: 01-2119475100-52-xxxx |
| Classification (EC 1272/2008) Repr. 2 - H361d | Classification (67/548/EEC) Repr. Cat. 3;R63 | |
| 2,4-dimethyl-6-tert-butyl phenol | | <0.1% |
| CAS-No.: 1879-09-0 | EC No.: 217-533-1 | Registration Number: 01-2119537289-29-xxxx |
| Classification (EC 1272/2008) Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 STOT RE 2 - H373 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410 | Classification (67/548/EEC) Xn;R22,R48/22. Xi;R36/38. N;R50/53. R43. | |

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

REACH Registration notes

This material is a mixture. All components have been registered under REACH by the Manufacturer or Supplier.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

Move into fresh air and keep at rest.

Get medical attention if any discomfort continues.

Ingestion

Get medical attention immediately!

Immediately rinse mouth and drink plenty of water (200-300 ml).

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS!

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water.

Get medical attention if any discomfort continues.

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Eye contact

Immediately flush with plenty of water or eyewash solution for up to 10 minutes.
Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation

No specific symptoms noted.

Ingestion

No specific symptoms noted.

Skin contact

Prolonged skin contact may cause redness and irritation.

Eye contact

May cause blurred vision and serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards

When heated and in case of fire, toxic vapours/gases may be formed.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Containers close to fire should be removed or cooled with water.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid inhalation of vapours and aerosol spray.

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Absorb spillage with suitable absorbent material.

Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

6.4. Reference to other sections

For waste disposal, see section 13. Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid spilling, skin and eye contact.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

| Name | STD | TWA - 8 Hrs | | STEL - 15 Min | | Notes |
|-------------------------------------|-----|-------------|----------------|---------------|-------------|-------|
| | | | | | | |
| 2-(2-BUTOXYETHOXY)ETHANOL | WEL | 10 ppm | 67.5 mg/m3 | 15 ppm | 101.2 mg/m3 | |
| 2-(2-METHOXYETHOXY)ETHANOL | WEL | 10 ppm(Sk) | 50.1 mg/m3(Sk) | | | |
| 2,4-dimethyl-6-tert-butyl phenol | | No std. | No std. | No std. | No std. | |
| 2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL | WEL | 10 ppm | 67.5 mg/m3 | 15 ppm | 101.2 mg/m3 | |

WEL = Workplace Exposure Limit.

Ingredient Comments

WEL = Workplace Exposure Limits

EUROLUB DOT4 LS.6**2-(2-BUTOXYETHOXY)ETHANOL (CAS: 112-34-5)**

| DNEL | | | | |
|-------------|-------------|------------|-------|-------------------|
| Industry | Inhalation. | Short Term | 101.2 | mg/m ³ |
| Industry | Dermal | Long Term | 20 | mg/kg/day |
| Industry | Inhalation. | Long Term | 67.5 | mg/m ³ |
| Consumer | Inhalation. | Short Term | 50.6 | mg/m ³ |
| Consumer | Dermal | Long Term | 10 | mg/kg/day |
| Consumer | Inhalation. | Long Term | 34 | mg/m ³ |
| Consumer | Oral | Long Term | 1.25 | mg/kg/day |

PNEC

| | | |
|-------------|-----|-------|
| Freshwater | 1 | mg/l |
| Marinewater | 0.1 | mg/l |
| Sediment | 4 | mg/kg |
| Soil | 0.4 | mg/kg |

2-(2-METHOXYETHOXY)ETHANOL (CAS: 111-77-3)**Ingredient Comments**

WEL = Workplace Exposure Limits

DNEL

| | | | | |
|----------|-------------|-----------|------------------|------------------------|
| Industry | Dermal | Long Term | Systemic Effects | 0.53 mg/kg/day |
| Industry | Inhalation. | Long Term | Systemic Effects | 50.1 mg/m ³ |
| Consumer | Dermal | Long Term | Systemic Effects | 0.27 mg/kg/day |
| Consumer | Inhalation. | Long Term | Systemic Effects | 25 mg/m ³ |
| Consumer | Oral | Long Term | Systemic Effects | 1.5 mg/kg/day |

PNEC

| | | |
|-----------------------|-------|-------|
| Freshwater | 12 | mg/l |
| Marinewater | 1.2 | mg/l |
| Intermittent release | 12 | mg/l |
| Sediment (Freshwater) | 44.4 | mg/kg |
| Sediment (Marinewat) | 4.44 | mg/kg |
| Soil | 2.44 | mg/kg |
| STP | 10000 | mg/l |

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)**DNEL**

| | | | | |
|----------|-------------|-----------|------------------|-----------------------|
| Industry | Dermal | Long Term | Systemic Effects | 50 mg/kg/day |
| Industry | Inhalation. | Long Term | Systemic Effects | 195 mg/m ³ |
| Consumer | Dermal | Long Term | Systemic Effects | 25 mg/kg/day |
| Consumer | Inhalation. | Long Term | Systemic Effects | 117 mg/m ³ |
| Consumer | Oral | Long Term | Systemic Effects | 2.5 mg/kg/day |

PNEC

| | | |
|---------------------|------|-------|
| Freshwater | 1.5 | mg/l |
| Marinewater | 0.15 | mg/l |
| Sediment Freshwater | 5.77 | mg/kg |
| Sediment Marinewate | 0.13 | mg/kg |
| Soil | 0.45 | mg/kg |
| STP | 200 | mg/l |

2,4-dimethyl-6-tert-butyl phenol (CAS: 1879-09-0)**DNEL**

| | | | | |
|----------|-------------|------------|------------------|------------------------|
| Industry | Dermal | Short Term | Systemic Effects | 0.12 mg/kg/day |
| Industry | Inhalation. | Short Term | Systemic Effects | 10.6 mg/m ³ |
| Industry | Dermal | Long Term | Systemic Effects | 0.02 mg/kg/day |
| Industry | Inhalation. | Long Term | Systemic Effects | 0.14 mg/m ³ |

PNEC

| | | |
|---------------------|--------|-------|
| Sediment Freshwater | 0.547 | mg/kg |
| Sediment Marinewate | 0.0547 | mg/kg |
| Soil | 0.26 | mg/kg |
| STP | 2.2 | mg/l |

8.2. Exposure controls**Protective equipment****Engineering measures**

Provide adequate general and local exhaust ventilation.

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Respiratory equipment

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

Hand protection

Use suitable protective gloves if risk of skin contact.

Eye protection

Wear approved safety goggles.

Other Protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Wash hands at the end of each work shift and before eating, smoking and using the toilet.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Appearance | Clear liquid. |
| Colour | Amber. |
| Odour | No characteristic odour. |
| Solubility | Miscible with water Miscible with: Ethanol. |
| Initial boiling point and boiling range (°C) | 260-300°C 760 mm Hg |
| Melting point (°C) | <-50°C |
| Relative density | 1.035 @ 15°C |
| Vapour pressure | <0.1 mPa @ 20°C |
| pH-Value, Conc. Solution | 7.0 - 10.5 |
| Flash point (°C) | >200°C CC (Closed cup). |
| Auto Ignition Temperature (°C) | >300°C |

9.2. Other information

Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid forming spray/aerosol mists.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information

Toxicological information on major component only.

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Inhalation

Unlikely to be hazardous by inhalation because of the low vapour pressure of the substance at ambient temperature.

Skin contact

Repeated exposure may cause skin dryness or cracking.

Toxicological information on ingredients.

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)

Acute toxicity:

Acute Toxicity (Oral LD50)

5170 mg/kg Rat

Conclusive data but not sufficient for classification.

Acute Toxicity (Dermal LD50)

3540 mg/kg Rabbit

Conclusive data but not sufficient for classification.

Acute Toxicity (Inhalation LC50)

Not relevant

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

Not irritating.

Serious eye damage/irritation:

Moderately Irritating. Risk of serious damage to eyes.

Respiratory or skin sensitisation:

Respiratory sensitisation

Not available.

Skin sensitisation

Guinea Pig

Not Sensitising.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Ames Test

Negative.

Carcinogenicity:

Carcinogenicity

Not available.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Fertility: NOAEL 1200 mg/kg Mouse

This substance has no evidence of toxicity to reproduction.

Reproductive Toxicity - Development

Developmental toxicity: NOAEL 625 mg/kg Rat

This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure:

STOT - Single exposure

NOAEL 500 mg/kg Oral Rat

Aspiration hazard:

Viscosity

Kinematic viscosity > 20.5 mm²/s.

Conclusive data but not sufficient for classification.

SECTION 12: ECOLOGICAL INFORMATION

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Ecotoxicity

The product is not expected to be hazardous to the environment. The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Ecotoxicological data on main component only

Ecological information on ingredients.

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)

Ecotoxicity

The product is not expected to be hazardous to the environment.

12.1. Toxicity

Ecological information on ingredients.

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)

Acute Toxicity - Fish

LC50 96 hours > 2200 mg/l *Leuciscus idus* (Golden orfe)

Species - *Scophthalmus maximus*

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours > 500 mg/l *Daphnia magna*

Acute Toxicity - Aquatic Plants

EC50 72 hours 2490 mg/l *Selenastrum capricornutum*

Acute Toxicity - Microorganisms

EC50 > 5000 mg/l Activated sludge

16 hrs

12.2. Persistence and degradability

Ecological information on ingredients.

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)

Biodegradation

Water Degradation (85%) 28 days

OECD 301 D

The substance is readily biodegradable.

12.3. Bioaccumulative potential

Ecological information on ingredients.

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)

Bioaccumulation factor

Not available.

Partition coefficient

log Pow 0.51

12.4. Mobility in soil

Ecological information on ingredients.

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)

Adsorption/Desorption Coefficient

Koc ~ 10

Henry's Law Constant

~ 0.000000000679 atm m³/mol @ 25°C

Surface tension

0.061 20

Units N/m

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

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Ecological information on ingredients.

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

None known.

Ecological information on ingredients.

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)

Not dangerous for the ozone layer

SECTION 13: DISPOSAL CONSIDERATIONS

General information

When handling waste, consideration should be made to the safety precautions applying to handling of the product.

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

13.1. Waste treatment methods

Incinerate in suitable combustion chamber.

SECTION 14: TRANSPORT INFORMATION

General

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

Transport Labels

No transport warning sign required.

14.4. Packing group

No information required.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

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

Uk Regulatory References

The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.

Guidance Notes

Workplace Exposure Limits EH40.

EU Legislation

Dangerous Substance Directive 67/548/EEC.

Dangerous Preparations Directive 1999/45/EC.

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Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Comments

Minor changes made

| | |
|---------------------------------|--------------------|
| Issued By | PCL Technical Team |
| Revision Date | 17/12/2014 |
| Revision | 3 |
| Supersedes date | 16/10/2014 |
| SDS No. | 12358 |
| Safety Data Sheet Status | Approved. |
| Date | 21/11/2012 |

Risk Phrases In Full

| | |
|--------|--|
| R22 | Harmful if swallowed. |
| R48/22 | Harmful: danger of serious damage to health by prolonged exposure if swallowed. |
| R36/38 | Irritating to eyes and skin. |
| R36 | Irritating to eyes. |
| R43 | May cause sensitisation by skin contact. |
| R63 | Possible risk of harm to the unborn child. |
| R41 | Risk of serious damage to eyes. |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

Hazard Statements In Full

| | |
|-------|---|
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H315 | Causes skin irritation. |
| H302 | Harmful if swallowed. |
| H317 | May cause an allergic skin reaction. |
| H373 | May cause damage to organs <<Organs>> through prolonged or repeated exposure. |
| H361d | Suspected of damaging the unborn child. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H400 | Very toxic to aquatic life. |

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.