# SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

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

### 1.1. Product identifier

Product name : DOT 3 & 4

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

Brake fluid

### 1.3. Details of the supplier of the safety data sheet

Registered company name : MOTUL
Address : 119, Boulevard Felix Faure. 93300 AUBERVILLIERS CEDEX FRANCE
Telephone : 33.1.48.11.70.00. Fax: 33.1.48.33.28.79.
Email : motul_hse@motul.fr

Registered company name (importer): High Performance Lubricants Ltd
21 O'Rorke Road, Penrose, Auckland 1061
PO Box 12 826 Penrose, Auckland, New Zealand
09 571 1366

**1.4 24 HOUR EMERGENCY TEPLEPHONE NUMBER:** 09 929 1483/0800 446 881 (toll free)

**1.5 NATIONAL POISON LINE** 0800 764 766

## SECTION 2 : HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Eye irritation, Category 2 (Eye Irrit. 2, H319).
Specific target organ toxicity (repeated exposure), Category 2 (STOT RE 2, H373).
This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.
This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.
Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation
6.4A
6.9B

### 2.2. Label elements

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Hazard pictograms :

GHS07 GHS08

Signal Word :
WARNING
Product identifiers :

| | |
|---|---|
| EC 203-872-2 | 2,2'-OXYBISETHANOL |

Hazard statements :

| | |
|---|---|
| H319 | Causes serious eye irritation. |
| H373 | May cause damage to organs through prolonged or repeated exposure (if swallowed). |

Precautionary statements - General :

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |

Precautionary statements - Prevention :

| | |
|---|---|
| P262 | Do not get in eyes, on skin, or on clothing. |
| P264 | Wash hands thoroughly after handling. |

Precautionary statements - Response :

| | |
|---|---|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P314 | Get medical advice/attention if you feel unwell. |

Precautionary statements - Disposal :

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

### 2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under article 57 of REACH: http://echa.europa.eu/fr/candidate-list-table

The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

## SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

**Composition :**

| Identification | (EC) 1272/2008 | Note | % |
|---|---|---|---|
| CAS: 143-22-6<br>EC: 205-592-6<br>REACH: 01-2119531322-53<br><br>2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL | GHS05<br>Dgr<br>Eye Dam. 1, H318 | | 25 <= x % < 50 |
| CAS: 111-46-6<br>EC: 203-872-2<br>REACH: 01-2119457857-21<br><br>2,2'-OXYBISETHANOL | GHS07, GHS08<br>Wng<br>Acute Tox. 4, H302<br>STOT RE 2, H373 | [1] | 10 <= x % < 25 |
| CAS: 111-77-3<br>EC: 203-906-6<br>REACH: 01-2119475100-52<br><br>2-(2-METHOXYETHOXY)ETHANOL | GHS08<br>Wng<br>Repr. 2, H361d | [1]<br>[2] | 1 <= x % < 2.5 |
| CAS: 112-34-5<br>EC: 203-961-6<br>REACH: 01-2119475104-44<br><br>2-(2-BUTOXYETHOXY)ETHANOL | GHS07<br>Wng<br>Eye Irrit. 2, H319 | [1] | 1 <= x % < 2.5 |

**Information on ingredients :**

[1] Substance for which maximum workplace exposure limits are available.

[2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

## SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

### 4.1. Description of first aid measures

**In the event of exposure by inhalation :**

Remove the victim to fresh air. If the symptoms persist, call a physician.

**In the event of splashes or contact with eyes :**

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

**In the event of splashes or contact with skin :**

Immediately remove all soiled clothing.

Wash immediately and abundantly with soap and water.

**In the event of swallowing :**

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

No data available.

## SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

**5.1. Extinguishing media**

**Suitable methods of extinction**

In the event of a fire, use :
- sprayed water or water mist
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO2)

**Unsuitable methods of extinction**

In the event of a fire, do not use :
- water jet

**5.2. Special hazards arising from the substance or mixture**

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.
Do not breathe in smoke.
In the event of a fire, the following may be formed :
- carbon monoxide (CO)
- carbon dioxide (CO2)

**5.3. Advice for firefighters**

No data available.

## SECTION 6 : ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

Consult the safety measures listed under headings 7 and 8.
Spilled product may make surfaces slippery.

**For non first aid worker**

Avoid any contact with the skin and eyes.

**For first aid worker**

First aid workers will be equipped with suitable personal protective equipment (See section 8).

**6.2. Environmental precautions**

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.
Prevent any material from entering drains or waterways.

**6.3. Methods and material for containment and cleaning up**

If the ground is contaminated, once the product has been recovered by sponging with an inert and non-combustible absorbent material, wash the contaminated area in plenty of water.
Clean preferably with a detergent, do not use solvents.

**6.4. Reference to other sections**

No data available.

## SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

**7.1. Precautions for safe handling**

Always wash hands after handling.
Remove and wash contaminated clothing before re-using.
Ensure that there is adequate ventilation, especially in confined areas.
Avoid contact with eyes.

**Fire prevention :**

Handle in well-ventilated areas.
Prevent access by unauthorised personnel.
Take precautionary measures against static discharges by bonding and grounding equipment.
No smoking.

**Recommended equipment and procedures :**

For personal protection, see section 8.
Observe precautions stated on label and also industrial safety regulations.
Avoid eye contact with this mixture.
Avoid exposure - obtain special instructions before use.
Packages which have been opened must be reclosed carefully and stored in an upright position.

**Prohibited equipment and procedures :**

No smoking, eating or drinking in areas where the mixture is used.
Do not breathe fumes, vapour, spray.

**7.2. Conditions for safe storage, including any incompatibilities**

Only use hydrocarbon-resistant containers, joints and pipes.

**Storage**

Keep out of reach of children.
Keep the container tightly closed in a dry, well-ventilated place.
The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

**Packaging**

Always keep in packaging made of an identical material to the original.

**7.3. Specific end use(s)**

No data available.

## SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters**

**Occupational exposure limits :**

- European Union (2009/161/EU, 2006/15/EC, 2000/39/EC, 98/24/EC)

| CAS | VME-mg/m3 : | VME-ppm : | VLE-mg/m3 : | VLE-ppm : | Notes : |
|---|---|---|---|---|---|
| 111-77-3 | 50.1 | 10 | - | - | Peau |
| 112-34-5 | 67.5 | 10 | 101.2 | 15 | - |

- Germany - AGW (BAuA - TRGS 900, 21/06/2010) :

| CAS | VME : | VME : | Excess | Notes |
|---|---|---|---|---|
| 111-46-6 | 10 ml/m3 | 44 mg/m3 | 4(I) | DFG, Y |
| 112-34-5 | - | 100 mg/m3 | 1(I) | DFG, Y |

- Denmark (2007) :

| CAS | TWA : | TWA : | Anm : | | | |
|---|---|---|---|---|---|---|
| 111-46-6 | 2.5 ppm | 11 mg/m3 | - | | | |
| 112-34-5 | - | 100 mg/m3 | - | | | |

- France (INRS - ED984 :2012) :

| CAS | VME-ppm : | VME-mg/m3 : | VLE-ppm : | VLE-mg/m3 : | Notes : | TMP No : |
|---|---|---|---|---|---|---|
| 111-77-3 | 10 | 50.1 | - | - | *, R3 | 84 |
| 112-34-5 | 10 | 67.5 | 15 | 101.2 | - | - |

- Finland (HTP-värden 2009) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---|---|---|---|---|---|
| 111-77-3 | 10 ppm | - | - | - | - |

- Spain (Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT), Mayo 2010) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---|---|---|---|---|---|
| 112-34-5 | 100 mg/m3 | - | - | - | - |

- Ireland (Code of practice for the safety, Health and Welfare at Work, 2010) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---|---|---|---|---|---|
| 111-46-6 | 23 ppm | - | - | - | - |

- Netherlands / MAC-waarde (SER, 4 May 2010) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---|---|---|---|---|---|
| 112-34-5 | 9 ppm | - | - | - | - |

- Poland (2009) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---|---|---|---|---|---|
| 111-46-6 | 10 mg/m3 | - | - | - | - |

- Czech Republic (Regulation No. 361/2007) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---|---|---|---|---|---|
| 112-34-5 | 100 mg/m3 | 200 mg/m3 | - | - | - |

- Slovakia (Regulation No. 300/2007) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---|---|---|---|---|---|
| 111-46-6 | 10 ppm | 44 mg/m3 | II..2 | | |
| 112-34-5 | | 100 mg/m3 | I. | | |

- Switzerland (SUVA 2009) :

| CAS | VME-mg/m3 : | VME-ppm : | VLE-mg/m3 : | VLE-ppm : | Temps : | RSB : |
|---|---|---|---|---|---|---|
| 111-46-6 | 44 | 10 | 176 | 40 | 4x15 | - |
| 112-34-5 | 67* | 10* | 101,2* | 15* | 4x15* | - |

- Sweden (AFS 2007:2) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 111-46-6 | 10 ppm | 20 ppm | - | - | - |
| 112-34-5 | 15 ppm | 30 ppm | - | - | - |

- UK / WEL (Workplace exposure limits, EH40/2005, 2007) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---|---|---|---|---|---|
| 111-46-6 | 23 ppm | - | - | - | - |

**Derived no effect level (DNEL) or derived minimum effect level (DMEL):**

2-(2-BUTOXYETHOXY)ETHANOL (CAS: 112-34-5)

**Final use:** **Workers.**
Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 20 mg/kg de poids corporel/jour

Exposure method: Inhalation.
Potential health effects: Short term local effects.
DNEL : 101.2 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 67 mg de substance/m3

**Final use:** **Consumers.**
Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 710 mg/kg de poids corporel/jour

Exposure method: Inhalation.
Potential health effects: Short term local effects.
DNEL : 50.6 mg de substance/m3

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 34 mg de substance/m3

2-(2-METHOXYETHOXY)ETHANOL (CAS: 111-77-3)

**Final use:** **Workers.**
Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 0.53 mg/kg de poids corporel/jour

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 50.1 mg de substance/m3

**Final use:** **Consumers.**
Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 1.5 mg/kg de poids corporel/jour

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 0.27 mg/kg de poids corporel/jour

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 25 mg de substance/m3

2,2'-OXYBISETHANOL (CAS: 111-46-6)

**Final use:** **Workers.**
Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 106 mg/kg de poids corporel/jour

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.
DNEL : 60 mg de substance/m3

**Final use:** **Consumers.**
Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 53 mg/kg de poids corporel/jour

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 12 mg de substance/m3

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL (CAS: 143-22-6)
**Final use:** **Workers.**
Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 50 mg/kg de poids corporel/jour

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 195 mg de substance/m3

**Final use:** **Consumers.**
Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 2.5 mg/kg de poids corporel/jour

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 25 mg/kg de poids corporel/jour

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 117 mg de substance/m3

**Predicted no effect concentration (PNEC):**

2-(2-BUTOXYETHOXY)ETHANOL (CAS: 112-34-5)
Environmental compartment: Soil.
PNEC : 0.4 mg/l

Environmental compartment: Fresh water.
PNEC : 1 mg/l

Environmental compartment: Sea water.
PNEC : 0.1 mg/l

Environmental compartment: Intermittent waste water.
PNEC : 3.9 mg/l

Environmental compartment: Fresh water sediment.
PNEC : 4 mg/l

Environmental compartment: Marine sediment.
PNEC : 0.4 mg/l

Environmental compartment: Waste water treatment plant.
PNEC : 200 mg/l

2-(2-METHOXYETHOXY)ETHANOL (CAS: 111-77-3)
Environmental compartment: Soil.
PNEC : 2.44 mg/kg

Environmental compartment: Fresh water.

| | |
|---|---|
| PNEC : | 12 mg/kg |
| Environmental compartment: | Sea water. |
| PNEC : | 1.2 mg/l |
| Environmental compartment: | Intermittent waste water. |
| PNEC : | 12 mg/l |
| Environmental compartment: | Fresh water sediment. |
| PNEC : | 44.4 mg/kg |
| Environmental compartment: | Marine sediment. |
| PNEC : | 0.44 mg/kg |
| Environmental compartment: | Waste water treatment plant. |
| PNEC : | 10000 mg/l |

2,2'-OXYBISETHANOL (CAS: 111-46-6)

| | |
|---|---|
| Environmental compartment: | Soil. |
| PNEC : | 1.53 mg/kg |
| Environmental compartment: | Fresh water. |
| PNEC : | 10 mg/l |
| Environmental compartment: | Sea water. |
| PNEC : | 1 mg/l |
| Environmental compartment: | Intermittent waste water. |
| PNEC : | 10 mg/l |
| Environmental compartment: | Fresh water sediment. |
| PNEC : | 20.9 mg/kg |
| Environmental compartment: | Waste water treatment plant. |
| PNEC : | 199.5 mg/l |

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

| | |
|---|---|
| Environmental compartment: | Soil. |
| PNEC : | 0.45 mg/kg |
| Environmental compartment: | Fresh water. |
| PNEC : | 1.5 mg/l |
| Environmental compartment: | Sea water. |
| PNEC : | 0.25 mg/l |
| Environmental compartment: | Intermittent waste water. |
| PNEC : | 5.0 mg/l |
| Environmental compartment: | Fresh water sediment. |
| PNEC : | 5.77 mg/kg |
| Environmental compartment: | Marine sediment. |
| PNEC : | 0.13 mg/kg |
| Environmental compartment: | Waste water treatment plant. |
| PNEC : | 200 mg/l |

**8.2. Exposure controls**

**Suitable technical inspections**

Ensure adequate ventilation, if possible with extractor fans at work posts and appropriate general extraction.
Personnel shall wear regularly laundered overalls.

**Personal protection measures, such as personal protective equipment**

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :

Use personal protective equipment that is clean and has been properly maintained.
Store personal protective equipment in a clean place, away from the work area.
Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

**- Eye / face protection**

Avoid contact with eyes.
Use eye protectors designed to protect against liquid splashes
Before handling, wear safety goggles with protective sides accordance with standard EN166.
In the event of high danger, protect the face with a face shield.
Prescription glasses are not considered as protection.
Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.
Provide eyewash stations in facilities where the product is handled constantly.

**- Hand protection**

Wear suitable protective gloves in the event of prolonged or repeated skin contact.
Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.
Gloves must be selected according to the application and duration of use at the workstation.
Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.
Type of gloves recommended :
- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
Recommended properties :
- Impervious gloves in accordance with standard EN374

**- Body protection**

Work clothing worn by personnel shall be laundered regularly.
After contact with the product, all parts of the body that have been soiled must be washed.

**- Respiratory protection**

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :
- A1 (Brown)
Particle filter according to standard EN143 :
- P2 (White)
Breathing apparatus only when aerosol or spray are formed.

## SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

**General information :**

| | |
|---|---|
| Physical state : | Fluid liquid. |
| Color: | Amber |

**Important health, safety and environmental information**

| | |
|---|---|
| pH : | Not stated. |
| | Slightly basic. |
| Boiling point/boiling range : | 206 °C. |
| Flash Point Interval : | PE > 100°C. |
| Vapour pressure (50°C) : | Not relevant. |
| Density : | > 1 |
| Water solubility : | Soluble. |
| Viscosity : | 5 à 10 cSt à 20°C |
| Self-ignition temperature : | 301 °C. |
| Decomposition point/decomposition range : | 301 °C. |

### 9.2. Other information

No data available.

## SECTION 10 : STABILITY AND REACTIVITY

### 10.1. Reactivity

No data available.

**10.2. Chemical stability**

This mixture is stable under the recommended handling and storage conditions in section 7.

**10.3. Possibility of hazardous reactions**

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

**10.4. Conditions to avoid**

Keep away from heat and from sources of ignition

**10.5. Incompatible materials**

Strong oxidants

**10.6. Hazardous decomposition products**

The thermal decomposition may release/form :
- carbon monoxide (CO)
- carbon dioxide (CO2)

## SECTION 11 : TOXICOLOGICAL INFORMATION

**11.1. Information on toxicological effects**

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.
Splashes in the eyes may cause irritation and reversible damage
May cause severe damage to organs in the event of repeated or prolonged exposure.

**11.1.1. Substances**

**Acute toxicity :**

2-(2-BUTOXYETHOXY)ETHANOL (CAS: 112-34-5)

| | |
|---|---|
| Oral route : | LD50 = 3384 mg/kg<br>Species : Rat |
| Dermal route : | LD50 = 2700 mg/kg<br>Species : Rabbit |

**Specific target organ systemic toxicity - repeated exposure :**

2,2'-OXYBISETHANOL (CAS: 111-46-6)

| | |
|---|---|
| Oral route : | 150 < C <= 300 mg/kg body weight/day<br>Duration of exposure : 28 jours |

**11.1.2. Mixture**

**Acute toxicity :**

| | |
|---|---|
| Oral route : | No observed effect.<br>Species : Rat<br>LD50 > 5000 mg/kg |
| Dermal route : | No observed effect.<br>Species : Rabbit<br>2,000 < LD50 <= 5000 mg/kg |

**Skin corrosion/skin irritation :**

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non allergic contact dermatitis and absorption through the skin.

**Aspiration hazard :**

"Inhalation of vapours may cause irritation of the respiratory system in very susceptible persons."
May cause lung damage if swallowed

## SECTION 12 : ECOLOGICAL INFORMATION

**12.1. Toxicity**

**12.1.1. Substances**

2-(2-BUTOXYETHOXY)ETHANOL (CAS: 112-34-5)

| | |
|---|---|
| Fish toxicity : | LC50 = 1300 mg/l<br>Species : Lepomis macrochirus<br>Duration of exposure : 96 h |

Crustacean toxicity : EC50 = 2850 mg/l
Species : Daphnia magna
Duration of exposure : 24 h

Algae toxicity : ECr50 >= 100 mg/l
Species : Desmodesmus subspicatus
Duration of exposure : 96 h
OCDE Ligne directrice 201 (Algues, Essai d'inhibition de la croissance)

Aquatic plant toxicity : ECr50 >= 100 mg/l

**12.1.2. Mixtures**

LC50 > 100 mg/l
Duration of exposure : 96 h

**12.2. Persistence and degradability**

**12.2.1. Substances**

2-(2-BUTOXYETHOXY)ETHANOL (CAS: 112-34-5)
Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

**12.2.2. Mixtures**

Rapidly degradable.

Biodegradability :

**12.3. Bioaccumulative potential**

**12.3.2. Mixtures**

Octanol/water partition coefficient : log Koe < 3.
Does not have the potential for bioconcentration.

**12.4. Mobility in soil**

Water soluble

**12.5. Results of PBT and vPvB assessment**

No data available.

**12.6. Other adverse effects**

No data available.

**German regulations concerning the classification of hazards for water (WGK) :**

WGK 1 (VwVwS vom 27/07/2005, KBws) : Slightly hazardous for water.

## SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

**13.1. Waste treatment methods**

Do not pour into drains or waterways.

**Waste :**

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.
Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.
Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

**Soiled packaging :**

Empty container completely. Keep label(s) on container.
Give to a certified disposal contractor.

**Codes of wastes (Decision 2001/573/EC, Directive 2006/12/EEC, Directive 94/31/EEC on hazardous waste) :**

16 01 13 * brake fluids

## SECTION 14 : TRANSPORT INFORMATION

Exempt from transport classification and labelling.
Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2015 - IMDG 2014 - ICAO/IATA 2015).

## SECTION 15 : REGULATORY INFORMATION

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

**- Classification and labelling information included in section 2:**

The following regulations have been used:
- EU Regulation No. 1272/2008 amended by EU Regulation No. 487/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 758/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 944/2013.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 605/2014.
- EU Regulation No. 1272/2008 amended by EU Regulation No. 1297/2014.

**- Container information:**

Containers to be fitted with a tactile warning of danger (see EC Regulation No. 1272/2008, Annex II, Part 3).

**- Particular provisions :**

No data available.

**- German regulations concerning the classification of hazards for water (WGK) :**

WGK 1 (VwVwS vom 27/07/2005, KBws) : Slightly hazardous for water.

**15.2. Chemical safety assessment**

No data available.

**15.3 This substance is to be managed using the conditions specified in an applicable Group Standard**

HSR002606

## SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.
The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.
It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.
The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

**Wording of the phrases mentioned in section 3 :**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H361d | Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure . |

**Abbreviations :**

DNEL : Derived No-Effect Level
PNEC : Predicted No-Effect Concentration
CMR: Carcinogenic, mutagenic or reprotoxic.
ADR : European agreement concerning the international carriage of dangerous goods by Road.
IMDG : International Maritime Dangerous Goods.
IATA : International Air Transport Association.
ICAO : International Civil Aviation Organisation
RID : Regulations concerning the International carriage of Dangerous goods by rail.
WGK : Wassergefahrdungsklasse (Water Hazard Class).
GHS07 : Exclamation mark
GHS08 : Health hazard
PBT: Persistent, bioaccumulable and toxic.
vPvB : Very persistent, very bioaccumulable.
SVHC : Substances of very high concern.