

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****Product identifier****Product Name** **BEPD****Chemical Name** 2-Butyl-2-ethylpropanediol **CAS No** 115-84-4**Other means of identification****Pure substance/mixture** Substance**Recommended use of the chemical and restrictions on use****Application** Raw material: Coatings.**Uses advised against** Not identified.**Details of the supplier of the safety data sheet****Manufacturer****Perstorp Oxo Belgium AB**

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**E-mail address** productinfo@perstorp.com**Emergency telephone number****Europe** (+)1 760 476 3961 (contract no: 334101)**Americas** (+)1 760 476 3962 (contract no: 334101)**Middle East and Africa** (+)1 760 476 3959 (contract no: 334101)**Asia Pacific** (+)1 760 476 3960 (contract no: 334101)**2. HAZARDS IDENTIFICATION****Hazards description**

Eye contact: Causes severe eye irritation. Risk of burns (in case the product is delivered in molten form).

**Classification of the substance or mixture**

Acute toxicity - Oral

Serious eye damage/eye irritation

Category 5 - (H303)

Category 2A - (H319)

**Label elements****Symbols/Pictograms****Signal word**

Warning

**Hazard statements**

Not applicable

**Precautionary statements**

P280 - Wear protective gloves and eye/face protection

P264 - Wash hands thoroughly after handling

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

Contains: 2-Butyl-2-ethylpropanediol

**Other hazards**

May be harmful if swallowed.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substance**

Chemical Name	CAS No	Weight-%
2-Butyl-2-ethylpropanediol	115-84-4	90-100

**4. FIRST AID MEASURES****Description of first aid measures**

<b>General advice</b>	Emergency eyewash facilities must be located in the vicinity of where the product is handled.
<b>Inhalation</b>	Remove to fresh air. Rinse mouth with water. If irritation persists get medical advice/attention.
<b>Skin contact</b>	In contact with molten product immediately flush with cold water for at least 10 minutes. Do not pull solidified product off the skin. In case of burn injury immediately get medical attention.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Use lukewarm water if possible. Keep eye wide open while rinsing. If eye irritation persists: Get medical advice/attention. After contact with the molten/hot product, cool rapidly with cold water. Seek immediate medical attention/advice.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. If a large quantity has been ingested or you feel unwell, get medical advice/attention.

**Self-protection of the first aider**

Avoid contact with skin, eyes or clothing.

**Most important symptoms and effects, both acute and delayed**

Eye contact: Causes severe irritation (tears, blurred vision and redness). Risk of burns (in case the product is delivered in molten form).

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

All types of extinguishing media are suitable. Use fire extinguishing methods suitable to surrounding conditions.

**Unsuitable extinguishing media**

High volume water jet.

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating and toxic gases and vapours.

**Hazardous combustion products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

**Protective equipment and precautions for firefighters**

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

**Additional information**

Prevent fire extinguishing water from contaminating surface water or the ground water system.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

Keep unprotected persons away from molten/hot product if released. Wear protective gloves and protective clothing, Tight sealing safety goggles, Rubber boots.

**Environmental precautions**

Minimize the area spreading and cover the drains. Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional ecological information.

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

If molten/hot product is released, pick up mechanically when cooled.

**Methods for cleaning up**

Clean contaminated surface thoroughly. Use: Water (with cleaning agent).

**7. HANDLING AND STORAGE****Precautions for safe handling**

Use personal protection recommended in Section 8.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.

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

No special measures are necessary.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

Users are advised to consider national Occupational Exposure Limits or other equivalent values, (if existing).

**Appropriate engineering controls**

Eyewash stations.

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

Eye/face protection	Tight sealing safety goggles.
Hand Protection	Wear protective gloves. Butyl rubber. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.
Skin and body protection	Normal work clothes for the chemical industry (long legs and sleeves). If any risk of getting in contact with hot product - use heat-resistant protective clothing.
Respiratory protection	None under normal use conditions. In case of insufficient ventilation, wear suitable respiratory equipment.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

**Appearance**

Solid or Melt  
white

**Odour**

Mild

**Odour threshold**

No information available

**Property****Value****Remarks • Method****pH**

Not applicable

**Melting point / freezing point**

41 °C / 106 °F

OECD 102

**Boiling point / boiling range**

264 °C / 507 °F

OECD Test No. 103: Boiling Point

**Flash point**

136 °C / 277 °F

CC (closed cup) Regulation (EC) No. 440/2008, Annex, A.9

**Evaporation rate**

No information available

**Flammability (solid, gas)**

Not flammable

EU Method A.10

**Explosive limits**

Upper explosive limits

Not applicable

Lower explosive limits

Not applicable

**Vapour pressure**

0.08 Pa

Calculation method SPARC, MPBPWIN (v1.43) @25°C

**Vapour density**

No information available

**Relative density**

0.97

ISO 1183-1 @20 °C

**Water solubility**

8.8 g/L

OECD Test No. 105: Water Solubility @20°C

**Solubility(ies)**

No information available

**Partition coefficient**

2.2

log Pow @25°C OECD Test No. 117: Partition Coefficient (n-octanol/water), HPLC Method

**Autoignition temperature**

Not applicable

**Decomposition temperature**

Not determined

**Kinematic viscosity**

No information available

**Dynamic viscosity**

Not determined

**Explosive properties**

Not explosive.

**Oxidising properties**

Not oxidizing.

**Density**

No information available

**Bulk density**

No information available

**Other Information**

No information available

**10. STABILITY AND REACTIVITY****Reactivity**

There exists no specific test data for this product. For further information, see the subsequent subsections of this chapter.

**Chemical stability**

Stable under normal conditions.

**Possibility of Hazardous Reactions**

None under normal use conditions. Reacts with: Strong oxidising agents.

**Conditions to avoid**

None under normal use conditions.

**Incompatible materials**

Incompatible with oxidising agents.

**Hazardous decomposition products**

Thermal decomposition can lead to release of irritating and toxic gases and vapours.

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Dermal. Inhalation.

**Symptoms related to the physical, chemical and toxicological characteristics**

See Section 4 for more information.

## Numerical measures of toxicity

### Acute toxicity

#### 2-Butyl-2-ethylpropanediol (115-84-4)

Method	Species	Exposure route	Effective dose	Remarks
Regulation (EC) No. 440/2008, Annex, B.1 bis	Rat	Oral	2900	mg/kg LD50 (lethal dose)
OECD Test No. 402: Acute Dermal Toxicity	Rat	Dermal	2000	mg/kg LD0

### Skin corrosion/irritation

Non-irritating to the skin.

#### 2-Butyl-2-ethylpropanediol (115-84-4)

Method	Species	Exposure route	Results:
Regulation (EC) No. 440/2008, Annex, B.4	Rabbit	Dermal	Non-irritant
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal	Non-irritant

### Serious eye damage/eye irritation

Causes serious eye irritation.

#### 2-Butyl-2-ethylpropanediol (115-84-4)

Method	Species	Exposure route	Results:
Regulation (EC) No. 440/2008, Annex, B.5	Rabbit	Eye	Irritating to eyes

### Respiratory or skin sensitisation

No sensitising effects known.

#### 2-Butyl-2-ethylpropanediol (115-84-4)

Method	Species	Exposure route	Results:
Regulation (EC) No. 440/2008, Annex, B.6	Guinea pig	Skin	Not a skin sensitiser

### Germ cell mutagenicity

Not mutagenic.

#### 2-Butyl-2-ethylpropanediol (115-84-4)

Method	Species	Results:
OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test	in vitro	Negative
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro	Negative
OECD Test No. 474: Mammalian Erythrocyte Micronucleus Test	Mouse	Negative

### Carcinogenicity

Since all in vitro and in vivo mutagenicity studies are negative, there is no hint for any carcinogenic potential.

### Reproductive toxicity

This product does not contain any known or suspected reproductive hazards.

#### 2-Butyl-2-ethylpropanediol (115-84-4)

Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 414: Pre-natal Development Toxicity Study	Rat	Oral	1000	mg/kg bw/d NOAEL

### STOT - single exposure

No information available

**STOT - repeated exposure**

<b>2-Butyl-2-ethylpropanediol (115-84-4)</b>				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 408: Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat female	Oral	150	mg/kg bw/d NOAEL
OECD Test No. 408: Repeated Dose 90-Day Oral Toxicity Study in Rodents	Rat male	Oral	15	mg/kg bw/d NOAEL
OECD Test No. 407: Repeated Dose 28-day Oral Toxicity Study in Rodents	Rat	Oral	1000	mg/kg bw/d NOAEL

**Aspiration hazard**

No information available.

**12. ECOLOGICAL INFORMATION****Toxicity**

Low toxicity to aquatic organisms.

<b>2-Butyl-2-ethylpropanediol (115-84-4)</b>					
Method	Species	Exposure route	Effective dose	Exposure time	Remarks
OECD Test No. 203: Fish, Acute Toxicity Test	Oncorhynchus mykiss (rainbow trout)	Freshwater	>100	96h	mg/l LC50 (lethal concentration)
OECD Test No. 202: Daphnia sp. Acute Immobilization Test	Daphnia magna	Freshwater	>100	48h	mg/l EC50 (effective concentration)
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Selenastrum capricornutum	Freshwater	>100	72h	mg/l ErC50
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	Bacteria toxicity	Freshwater	650	3h	mg/l EC50 (effective concentration)
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Selenastrum capricornutum	Freshwater	45	72h	mg/l NOEC

**Persistence and degradability**

Not readily biodegradable. The substance is inherently biodegradable and therefore has no potential to persist.

<b>2-Butyl-2-ethylpropanediol (115-84-4)</b>			
Method	Value	Exposure time	Results:
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)	<7%	28d	Not readily biodegradable
OECD Test No. 302B: Inherent Biodegradability: Zahn-Wellens/ EVPA Test	79%	28d	The substance is inherently biodegradable and therefore has no potential to persist.
OECD Test No. 111: Hydrolysis as a Function of pH	>365 days		Hydrolysis , t1/2

**Bioaccumulative potential**

Based on the partition coefficients of the ingredients the product is not expected to bioaccumulate in organisms.

Chemical Name	Partition coefficient	Bioconcentration factor (BCF)
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2-Butyl-2-ethylpropanediol	2.2	
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**Mobility in soil**

The substance is not expected to adsorb to a high degree to suspended solids and sediment based upon the log Pow.

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS****Disposal methods**

This material and its container must be disposed of as hazardous waste. Incinerate at a licensed installation.

**Contaminated packaging**

Contaminated packaging materials must be disposed of in the same manner as the product. Thoroughly emptied and clean packaging may be recycled.

**14. TRANSPORT INFORMATION**

<b>ADR Road transport</b>	Not regulated
<b>RID Rail transport</b>	Not regulated
<b>IMDG Sea transport</b>	Not regulated
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available
<b>IATA Air transport</b>	Not regulated

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****International Regulations**

Not applicable.

**Argentina**

Not applicable

**Egypt**

Not applicable

**Malaysia**

Not applicable

**Russia**

Not applicable

**Singapore**

Not applicable

**Thailand**

Not applicable

**16. OTHER INFORMATION****Key or legend to abbreviations and acronyms used in the safety data sheet**

Not applicable

**Issue Date** 24-Sep-2015

**Revision Date** 24-Sep-2015

**Revision Note** No information available.

**This safety data sheet complies with the requirements of:** Globally Harmonised System (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text

**End of Safety Data Sheet**