

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product Name

**Di-Trimethylolpropane**

Chemical Name

2,2'-[Oxybis(methylene)]bis[2-ethylpropane-  
1,3-diol]

CAS No

23235-61-2

EC No

245-509-0

REACH registration number

01-2119456618-28-0000

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

Manufacture of substances. Distribution and storage. Formulations. Use: as a reactive processing aid, in PVC stabilizers and PVC items. Manufacture: of oligomers, of polymers

**Professional**

Use: in laboratories, in PVC stabilizers and PVC items

**Consumer**

Use: in PVC stabilizers and PVC items

**Uses advised against**

Not identified.

**1.3. Details of the supplier of the safety data sheet****Manufacturer****Perstorp Specialty Chemicals AB**

SE-284 80 Perstorp, Sweden

Tel. +46 435 380 00

www.perstorp.com

**E-mail address**

productinfo@perstorp.com

**1.4. Emergency telephone number****Europe**

(+1 760 476 3961 (contract no: 334101)

**United Kingdom**

(+44 8 08 189 0979 (contract no: 334101)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

This substance is not classified as dangerous according to regulation (EC) 1272/2008 [CLP]

**2.2. Label elements**

This substance is not classified as dangerous according to regulation (EC) 1272/2008 [CLP]

**Symbols/Pictograms**

Not applicable

**Signal word**

None

**Hazard statements**

Not applicable

**Precautionary Statements**

Not applicable

**2.3. Other hazards**

No special hazards are associated with this product. The product as such (flakes) does not cause dust explosions but fresh

dust may. This substance does not meet the criteria for classification as PBT or vPvB.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Chemical Name	EC No	CAS No	REACH registration number	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol]	245-509-0	23235-61-2	01-2119456618-28-0000	>97	Not classified

Full text of H- and EUH-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Inhalation</b>	First aid measures not required, but get fresh air for personal comfort.
<b>Skin contact</b>	First aid measures not required, but wash exposed skin with soap and water for hygienic reasons.
<b>Eye contact</b>	First aid measures not required, but rinse opened eye under running water for personal comfort to avoid mechanical irritation.
<b>Ingestion</b>	Clean mouth with water. If a large quantity has been ingested or if you feel unwell, get medical advice/attention.

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

None known.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

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

##### Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

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

Thermal decomposition can lead to release of irritating and toxic gases and vapours; Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

#### 5.3. Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### SECTION 6: Accidental release measures

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

Ensure adequate ventilation. If dusty conditions wear respiratory protective device with dust filter, gloves and protective clothing for hygienic reasons. The product is not dust explosive but fresh dust can form an explosive air/dust mixture.

#### 6.2. Environmental precautions

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.

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

##### Methods for containment

Cover with plastic sheet to prevent spreading.

#### Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal. After cleaning, flush away traces with water.

### 6.4. Reference to other sections

See Section 7,8,13 for more information.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Ensure good ventilation at the work station. The product is not dust explosive but fresh dust can form an explosive air/dust mixture. Any unavoidable deposit of dust must be regularly removed.

#### General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

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

Keep tightly closed in a dry and cool place.

### 7.3. Specific end use(s)

This information is supplied in the present Safety Data Sheet.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure Limits

Keep personal exposure levels below Derived No Effect Level (DNEL) and national exposure limit values (if existing).

#### Derived No Effect Level (DNEL) - worker

2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)			
Type	Exposure route	DNEL	Remarks
Chronic effects, systemic	Dermal	0.7	mg/kg bw/d
Chronic effects, systemic	Inhalation	2.4	mg/m <sup>3</sup>

#### Derived No Effect Level (DNEL) - Consumer

2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)			
Type	Exposure route	DNEL	Remarks
Chronic effects, systemic	Oral	0.3	mg/kg bw/d
Chronic effects, systemic	Dermal	0.3	mg/kg bw/d
Chronic effects, systemic	Inhalation	0.6	mg/m <sup>3</sup>

#### Predicted No Effect Concentration (PNEC)

2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)		
Environmental compartment	Predicted No Effect Concentration (PNEC)	Remarks
Freshwater	1	mg/l
Intermittent	1	mg/l
Impact on Sewage Treatment	100	mg/l
Marine water	0.1	mg/l

### 8.2. Exposure controls

#### Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

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

Eye/face protection	No specific measures identified. Recommendation(s): Wear safety glasses with side shields (or goggles).
Hand Protection	Protective gloves not really required. However, we recommend using protective gloves

Skin and body protection	made of rubber. Chloroprene rubber, CR, Nitrile rubber, NBR. Normal work clothes for the chemical industry.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are likely to be exceeded or if irritation or other symptoms are experienced, NIOSH/MSHA or EN 136 approved respiratory protection should be worn.
Recommended filter type:	Particle filter device: P2

**Environmental exposure controls**

Not relevant since not classified as dangerous for the environment.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties****Appearance**

Solid  
Flakes  
white

**Odour**

Odourless

**Odour threshold**

Not applicable

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

No information available

**Melting point / freezing point**

109 °C

OECD Test No. 102: Melting Point/ Melting Range

**Boiling point / boiling range**

378 °C

ASTM E 537-02

**Flash point**

Not applicable

**Evaporation rate**

No information available

**Flammability (solid, gas)**

Not flammable (EU Method A.10)

**Explosive limits**

Upper explosive limits

No information available

Lower explosive limits

No information available

**Vapour pressure**

4.7x10<sup>-7</sup> Pa

Calculation method MPBPWIN (v1.43)

**Vapour density**

No information available

**Relative density**

1.13

ISO 1183-1, @20°C

**Water solubility**

21 g/L

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

**Solubility(ies)**

No information available

**Partition coefficient**

0.88

OECD Test No. 117: Partition Coefficient (n-octanol/water), HPLC Method @ 20 °C

**Autoignition temperature**

Not applicable

**Decomposition temperature**

No information available

**Kinematic viscosity**

Not applicable

**Dynamic viscosity**

Not applicable

**Explosive properties**

Not explosive. May form explosive mixtures with air

**Oxidising properties**

Not oxidising.

**Density**

See above.

**Bulk density**

500 kg/m<sup>3</sup>

ASTM 1895-96 @20°C

**9.2. Other information**

No information available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

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

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

The product as such (flakes) does not cause dust explosions but fresh dust may.

**10.4. Conditions to avoid**

Avoid generation of dust.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

Thermal decomposition can lead to release of irritating and toxic gases and vapours; Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Information on likely routes of exposure**

Inhalation. Dermal.

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

See Section 4 for more information.

**Numerical measures of toxicity****Acute toxicity**

Product does not present an acute toxicity hazard based on known or supplied information.

<b>2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)</b>				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 401: Acute Oral Toxicity	Mouse	Oral	14500	LD50 (lethal dose) mg/kg
OECD Test No. 403: Acute Inhalation Toxicity	Rat	Inhalation	> 5.15	LC0 4h mg/l Maximum attainable concentration

**Skin corrosion/irritation**

Non-irritating to the skin.

<b>2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)</b>			
Method	Species	Exposure route	Results:
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal	Non-irritating to the skin

**Serious eye damage/eye irritation**

Non-irritant.

<b>2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)</b>			
Method	Species	Exposure route	Results:
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye	The substance was non-irritant

**Respiratory or skin sensitisation**

Not a skin sensitiser.

<b>2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)</b>			
Method	Species	Exposure route	Results:
OECD Test No. 429: Skin Sensitisation: Local Lymph Node Assay	Mouse	Skin	Not a skin sensitiser

**Germ cell mutagenicity**

Not mutagenic.

2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)		
Method	Species	Results:
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro	Negative
OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro	Negative
OECD 490	in vitro	Negative

**Carcinogenicity**

There is no indication for any carcinogenic potential since all in vitro mutagenicity studies are negative.

**Reproductive toxicity**

Not expected.

2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 414: Pre-natal Development Toxicity Study	Rat	Oral	1000	NOAEL mg/kg bw/d no maternal toxicity
OECD Test No. 414: Pre-natal Development Toxicity Study	Rat	Oral	<100	NOAEL mg/kg bw/d developmental toxicity
OECD Test No. 414: Pre-natal Development Toxicity Study	Rat	Oral	100	LOAEL mg/kg bw/d developmental toxicity

**STOT - single exposure** None known

**STOT - repeated exposure**

2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)				
Method	Species	Exposure route	Effective dose	Remarks
OECD Test No. 407: Repeated Dose 28-day Oral Toxicity Study in Rodents	Rat	Oral	1000	NOAEL mg/kg bw/d

**Aspiration hazard**

No hazard identified.

**SECTION 12: Ecological information****12.1. Toxicity**

Low toxicity to aquatic organisms.

2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)					
Method	Species	Exposure route	Effective dose	Exposure time	Remarks
OECD Test No. 203: Fish, Acute Toxicity Test	Brachydanio rerio	Freshwater	>1000	96h	LC50 (lethal concentration) mg/l
OECD Test No. 202: Daphnia sp. Acute Immobilization Test	Daphnia magna	Freshwater	3560	48h	EC50 (effective concentration) mg/l
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Selenastrum capricornutum	Freshwater	>1000	72h	EC50 (effective concentration) mg/l
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	Bacteria toxicity	Freshwater	>1000	3h	EC50 (effective concentration) mg/l

**12.2. Persistence and degradability**

According to OECD guidelines for testing chemicals, a test compound is regarded as easily biodegradable if the loss of DOC

within 28 days is greater than 70%. The pass value has to be reached in a 10-day window within the 28-day period of the test. The 10-day window begins when the degree of biodegradation has reached 10% DOC and must end before day 28 of the test. This criterion was not reached for the test article and so the product cannot be regarded as readily biodegradable. After 35 days over 90% of the DOC had been removed from the test system which indicates that, though not readily biodegradable, the product does possess a degree of biodegradability and can be considered inherently biodegradable.

<b>2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol] (23235-61-2)</b>			
Method	Value	Exposure time	Results:
OECD Test No. 301A: Ready Biodegradability: DOC Die-Away Test (TG 301 A)	<70%	28d	Not readily biodegradable
OECD Test No. 302B: Inherent Biodegradability: Zahn-Wellens/ EVPA Test	90%	28d	Inherently biodegradable.
OECD Test No. 111: Hydrolysis as a Function of pH	-	5d	Stable @ 50°C, ph 4,7,9

### 12.3. Bioaccumulative potential

No bioaccumulation potential.

Chemical Name	Partition coefficient	Bioconcentration factor (BCF)
2,2'-[Oxybis(methylene)]bis[2-ethylpropane-1,3-diol]	0.88	

### 12.4. Mobility in soil

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

### 12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

### 12.6. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Waste from residues/unused products

The product is not classified as hazardous waste. Incinerate at a licensed installation.

#### Contaminated packaging

Thoroughly emptied and clean packaging may be recycled.

#### Waste codes / waste designations according to EWC / AVV

Waste from residues/unused products; 16 03 06.

#### Other Information

Waste codes should be assigned by the user based on the application for which the product was used.

## SECTION 14: Transport information

### ADR Road transport

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

### RID Rail transport

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated

14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

**IMDG Sea transport**

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special precautions for user	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

**IATA Air transport**

	Not regulated
14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****International Regulations**

Not applicable.

**European Union****France**

Occupational Illnesses (R-463-3, France)

Not applicable

**Germany**

Water hazard class (WGK)

slightly hazardous to water (WGK 1)

**15.2. Chemical safety assessment**

A Chemical Safety Assessment has been carried out for this substance.

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet**

Issue Date	14-Dec-2016
Revision Date	13-Dec-2016
Revision Note	No information available

**This safety data sheet complies with the requirements of:** Regulation (EC) No. 1907/2006, COMMISSION REGULATION (EU) No. 830/2015 of 20 May 2015.

**Disclaimer**

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**End of Safety Data Sheet**