

Safety Data Sheet

CMR-480 2C Universal Clear Coat

according to Regulation (EU) 2015/830

Last Revision:

02.06.20



Version:

V-2020-001

HR 1000

SECTION 1

Identification of the substance/mixture and of the company

1.1 Product identifier

CMR-480

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

Relevant identified uses:

Protective film for tarpaulin

1.3 Details of the supplier of the safety data sheet

Manufacturer/Distributor	CMR Coatings GmbH
Address/POB	Wilhelmstr. 8
IVR/ZIP/Place	D-32602 Vlotho
E-Mail	info@cmr-coatings.de
Telephone	+49 (0) 57 33 – 96 35 – 260
Fax	+49 (0) 57 33 – 96 35 – 263
Department of MSDS	info@cmr-coatings.de

1.4 Emergency telephone number

+49 (0) 57 33 – 96 35 – 260 (Monday - Friday, 8:00 - 16:00)

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Skin Irrit. 2 / H315	skin corrosion/irritation	Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation	Causes serious eye irritation.
Skin Sens. 1 / H317	Respiratory or skin sensitisation	May cause an allergic skin reaction.

Additional information

15,18 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

14,60 percent of the mixture consists of components of unknown hazards to the aquatic environment

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Warning

Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.

Precautionary statements

P261	Avoid breathing vapours.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves and eye/face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing.
P501	Dispose of contents/container to industrial incineration plant.
P502	Refer to manufacturer or supplier for information on recovery or recycling.

Hazard components for labelling

reaction mass of
 α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and
 α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)
 2-Methyl-4-isothiazolin-3-on
 mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon[EG-Nr. 247-500-7]/2-Methyl-3(2H)-isothiazolon[EG-Nr.220-239-6] (3:1)

Additional information for labelling

EUH210 Safety data sheet available on request.

2.3 Other hazards

No data available.

SECTION 3 Composition/information on ingredients

3.1 Substances

This product is a mixture.

3.2 Mixtures

Aqueous plastic dispersion with additives.

Hazardous ingredients

2-Butoxyethanol

EC No 203-905-0

CAS-Nr. 111-76-2

Content 12,5 - 20 %

Classification codes

Acute Tox. 4; H302 – Acute Tox. 4; H312 – Skin Irrit. 2;
 H315 – Eye Irrit. 2; H319 Acute Tox. 4; H332

For this substance there are Union workplace exposure limits (see section 8).

1-Methoxypropan-2-ol

EC No 203-539-1

CAS-Nr. 107-98-2

Content 2,5 - 5 %

Classification codes

Flam. Liq. 3; H226 – STOT SE3; H336

For this substance there are Union workplace exposure limits (see section 8).

reaction mass of

α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene)
 and

α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3

-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

EC No 400-830-7

CAS-Nr. 607-176-00-3

Content 1 - 2,5%

Classification codes

Skin Sens. 1A H317 / Aquatic Chronic 2 H411

paraffins(oil), C5-C20

EC No 265-233-4

CAS-Nr. 64771-72-8

Content 1 - 2,5%

Classification codes

Asp. Tox. 1 H304

2-dimethylaminoethanol

EC No 203-542-8

CAS-Nr. 108-01-0

Content 0,1 - 0,5%

Classification codes

Acute Tox. 4 H302 / Acute Tox. 4 H312 / Acute Tox. 3 H331 /
 Skin Corr. 1B H314 / Eye Dam. 1 H318 / STOT SE 3 H335 /
 Flam. Liq. 3 H226

2-Methyl-4-isothiazolin-3-on

EC No 220-239-6

CAS-Nr. 2682-20-4

Content < 0,01%

Classification codes

Acute Tox. 3 H301 / Acute Tox. 3 H311 / Acute Tox. 2 H330 / Skin Corr.
 1B H314 / Eye Dam. 1 H318 / Skin Sens. 1A H317 / Aquatic Acute 1 H400
 (M = 10) / Aquatic Chronic 1 H410 (M = 1)
 Specific concentration limit (SCL): Skin Sens. 1A H317 \geq 0,0015

mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon[EG-Nr247-500-7]/
 2-Methyl-3(2H)-isothiazolon[EG-Nr.220-239-6] (3:1)

EC No 55965-84-9

CAS-Nr. 613-167-00-5

Content < 0,01%

Classification codes

Acute Tox. 3 H301 / Acute Tox. 2 H310 / Acute Tox. 2 H330 / Skin Corr.
 1C H314 / Eye Dam. 1 H318 / Skin Sens. 1A H317 / Aquatic Acute 1 H400
 (M = 100) / Aquatic Chronic 1 H410 (M = 100)

Specific concentration limit (SCL): Skin Corr. 1C H314 $\geq 0,6$ / Skin Irrit. 2 H315 $\geq 0,06$ / Eye Dam. 1 H318 $\geq 0,6$ / Eye Irrit. 2 H319 $\geq 0,06$ / Skin Sens. 1A H317 $\geq 0,0015$

The wording of the classification codes is in section 16.

SECTION 4 First aid measures

4.1 Description of first aid measures

General advice	In all cases of doubt, or when symptoms persist, seek medical advice. In case of nothing by mouth, unconsciousness give place in recovery position and seek medical advice.
If inhaled	Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.
Skin contact	Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.
If swallowed	If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

In all cases of doubt, or when symptoms persist, seek medical advice.

4.3 Indication of any immediate medical attention and special treatment needed

First Aid, decontamination, treatment of symptoms.

SECTION 5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Unsuitable extinguishing media

strong water jet

5.2 Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3 Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ventilate affected area. Do not breathe vapours.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

6.4 Reference to other sections

Observe protective provisions (see section 7 and 8).

SECTION 7 Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin, eyes and clothes. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRBS 2153)".

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 10 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3 Specific end uses

Observe technical data sheet. Observe instructions for use.

SECTION 8

Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

2-dimethylaminoethanol

INDEX No. 603-047-00-0 / EC No. 203-542-8 / CAS No. 108-01-0

TWA: 7,4 mg/m³; 2 ppm

STEL: 22 mg/m³; 6 ppm

Additional information

TWA : long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

DNEL:

1-methoxy-2-propanol

INDEX No. 603-064-00-3 / EC No. 203-539-1 / CAS No. 107-98-2

DNEL long-term dermal (systemic), Workers: 50,6 mg/kg

DNEL acute inhalative (local), Workers: 553,5 mg/m³

DNEL long-term inhalative (systemic), Workers: 369 mg/m³

DNEL long-term oral (repeated), Consumer: 3,3 mg/kg

DNEL long-term dermal (systemic), Consumer: 18,1 mg/kg

DNEL long-term inhalative (systemic), Consumer: 43,9 mg/m³

2-butoxyethanol

INDEX No. 603-014-00-0 / EC No. 203-905-0 / CAS No. 111-76-2

DNEL acute dermal, short-term (systemic), Workers: 89 mg/kg

DNEL long-term dermal (systemic), Workers: 75 mg/kg

DNEL acute inhalative (local), Workers: 246 mg/m³

DNEL acute inhalative (systemic), Workers: 663 mg/m³

DNEL long-term inhalative (systemic), Workers: 98 mg/m³

DNEL short-term oral (acute), Consumer: 13,4 mg/kg

DNEL long-term oral (repeated), Consumer: 3,2 mg/kg

DNEL acute dermal, short-term (systemic), Consumer: 44,5 mg/kg

DNEL long-term dermal (systemic), Consumer: 38 mg/kg

DNEL acute inhalative (local), Consumer: 123 mg/m³

DNEL acute inhalative (systemic), Consumer: 426 mg/m³

DNEL long-term inhalative (systemic), Consumer: 49 mg/m³

reaction mass of

α-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω

-hydroxypoly(oxyethylene) and

α-3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl-ω-3

-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

INDEX No. 607-176-00-3 / EC No. 400-830-7

DNEL long-term oral (repeated), Workers: 0,025 mg/kg

DNEL long-term dermal (systemic), Workers: 0,5 mg/kg

DNEL long-term inhalative (systemic), Workers: 0,35 mg/m³

DNEL long-term oral (repeated), Consumer: 0,025 mg/kg

DNEL long-term dermal (systemic), Consumer: 0,25 mg/kg

DNEL long-term inhalative (systemic), Consumer: 0,085 mg/m³

2-dimethylaminoethanol

INDEX No. 603-047-00-0 / EC No. 203-542-8 / CAS No. 108-01-0

DNEL long-term dermal (systemic), Workers: 1,04 mg/kg

DNEL long-term inhalative (systemic), Workers: 7,4 mg/m³

PNEC:

1-methoxy-2-propanol

INDEX No. 603-064-00-3 / EC No. 203-539-1 / CAS No. 107-98-2

PNEC aquatic, freshwater: 10 mg/l

PNEC aquatic, marine water: 1 mg/l

PNEC aquatic, intermittent release: 100 mg/l

PNEC sediment, freshwater: 41,6 mg/kg

PNEC sediment, marine water: 4,17 mg/kg

PNEC, soil: 2,47 mg/kg

PNEC sewage treatment plant (STP): 100 mg/l

2-butoxyethanol

INDEX No. 603-014-00-0 / EC No. 203-905-0 / CAS No. 111-76-2

PNEC aquatic, freshwater: 8,8 mg/l

PNEC aquatic, marine water: 0,88 mg/l

PNEC aquatic, intermittent release: 9,1 mg/l

PNEC sediment, freshwater: 34,6 mg/kg

PNEC sediment, marine water: 3,46 mg/kg

PNEC, soil: 2,33 mg/kg

PNEC sewage treatment plant (STP): 463 mg/l

reaction mass of

α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω

-hydroxypoly(oxyethylene) and

α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3

-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

INDEX No. 607-176-00-3 / EC No. 400-830-7

PNEC aquatic, freshwater: 0,0023 mg/l

PNEC aquatic, marine water: 0,0002 mg/l

PNEC aquatic, intermittent release: 0,028 mg/l

PNEC sediment, freshwater: 3,06 mg/kg

PNEC sediment, marine water: 0,306 mg/kg

PNEC, soil: 2 mg/kg

PNEC sewage treatment plant (STP): 10 mg/l

2-dimethylaminoethanol

INDEX No. 603-047-00-0 / EC No. 203-542-8 / CAS No. 108-01-0

PNEC aquatic, freshwater: 0,0661 mg/l

PNEC aquatic, marine water: 0,0066 mg/l
PNEC aquatic, intermittent release: 0,0661 mg/l
PNEC sediment, freshwater: 0,0529 mg/kg
PNEC, soil: 0,0177 mg/kg
PNEC sewage treatment plant (STP): 10 mg/l

8.2 Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protective equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection

For prolonged or repeated handling the following glove material must be used: nitrile rubber Thickness of the glove material > 0,4 mm ; Breakthrough time (maximum wearing time) > 480 min. Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374

Eye/face protection

Wear closely fitting protective glasses in case of splashes.

Body protection Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

Protective measures After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:

Aggregate state:		liquid
Colour:		whitish
Odour:		slight individual odour
Melting point/freezing point:		-95 °C
Initial boiling point/boiling range:		100 °C
Flash point:		> 100 °C
Flammability:		Not applicable.
Ignition temperature:		230°C
Auto flammability:		Not applicable.
Oxidising properties:		Not applicable.
Explosive properties:		Not applicable.
Explosion limits:	lower	1,17 Vol-%
	upper	13,7 Vol-%
Water solubility:	(T = 20 °C)	Dispersible in each ratio.
Vapour pressure:	(T = 20 °C)	Not available.
Vapour density (air = 1):		Not available.
Partition coefficient (n-octanol/water):		Not available.
Solids content		30 - 35 %
Density:	(T = 20 °C)	1,02 g/cm ³
pH value:	(T = 20 °C)	7.0 - 8.0
Viscosity - kin. (4 mm DIN flow cup):	(T = 20 °C)	15 - 20 s
Separation of solvent:		Not applicable.
Volatiles/VOC:		approx. 15 %
Evaporation rate:		Not applicable.

Solids content:		33,17 Wt%
solvent content:		
Organic solvents:		16,59 Wt%

9.2 Other information

No data available.

SECTION 10 Stability and reactivity

10.1 Reactivity

No information available. none, if used correctly

10.2 Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3 Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4 Conditions to avoid

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5 Incompatible materials

Not applicable.

10.6 Hazardous decomposition products

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides. none, if used correctly.

SECTION 11 Toxicological information

Classification according to Regulation (EC) No 1272/2008 [CLP]

No data on preparation itself available.

11.1 Information on toxicological effects

Acute toxicity

1-methoxy-2-propanol

oral, LD50, Rat: 4016 mg/kg

dermal, LD50, Rat: > 2000 mg/kg

inhalative (vapours), LC0, Rat: > 7000 ppm (6 h)

2-butoxyethanol

oral, LD50, Rat: 1300 mg/kg

Method: OECD 401

oral, NOAEL, Male rat : < 69 mg/kg (90 D)

Method: OECD 408

inhalative (vapours), LOAEL(C):, Rat: 152 mg/m³ (102 W)

Method: OECD 453

dermal, LD 0:, Guinea pig: > 2000 mg/kg

dermal, NOAEC, Guinea pig: > 2000

inhalative (vapours), LC0, Guinea pig: > 2 mg/l (7 h)

reaction mass of

**α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and
 α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)**

oral, LD50, Rat: > 5000 mg/kg

Method: OECD 401

dermal, LD50, Rat: > 2000 mg/kg

Method: OECD 402

inhalative (dust and mist), LC50, Rat: > 5,8 mg/l (4 h)

2-Methyl-4-isothiazolin-3-on

oral, LD50, Rat: 120 mg/kg

dermal, LD50, Rabbit: 242 mg/kg

inhalative (dust and mist), LC50, Rat: 0,11 mg/l (4 h)

Method: OECD 403

mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon[EG-Nr 247-500-7]/

2-Methyl-3(2H)-isothiazolon[EG-Nr.220-239-6] (3:1)

oral, LD50, Rat: 66 mg/kg

Toxic if swallowed.

dermal, LD50, Rat: 141 mg/kg

nhalative (dust and mist), LC50, Rat: 0,17 mg/l (4 h)

2-dimethylaminoethanol

oral, LD50, Rat: 1183 mg/kg ; evaluation Harmful if swallowed.

Method: OECD 401

dermal, LD50, Rabbit: 1219 mg/kg ; evaluation Harmful in contact with skin.

Method: OECD 402

Danger through skin absorption

inhalative (vapours), LC50, Rat: 6,1 mg/l 0 - 6,1 mg/l (4 h); evaluation Toxic by inhalation.

Method: OECD 403

Skin corrosion/irritation; Serious eye damage/eye irritation

Causes skin irritation.

Causes serious eye irritation.

1-methoxy-2-propanol

eyes, Rabbit

2-butoxyethanol

Skin, Rabbit. (4 h)

eyes, Rabbit (24 h)

Method: OECD 405

2-dimethylaminoethanol

Skin (4 h)

Causes severe skin burns and eye damage.

eyes

Mouth / throat / esophagus / stomach: evaluation strongly corrosive.

If swallowed, severe burns of the mouth and throat and to the danger of perforation of esophagus and stomach.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Based on available data, the classification criteria are not met.

STOT-single exposure; STOT-repeated exposure

2-Methyl-4-isothiazolin-3-on

Specific target organ toxicity (single exposure), Irritation

2-dimethylaminoethanol

Specific target organ toxicity (single exposure), Irritation evaluation May cause respiratory irritation.

Aspiration hazard

paraffins(oil), C5-C20

Aspiration hazard

Practical experience/human evidence

Overall Assessment on CMR properties

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

SECTION 12 Ecological information

Classification according to Regulation (EC) No 1272/2008 [CLP]

There is no information available on the preparation itself .

Do not allow to enter into surface water or drains.

12.1 Toxicity

1-methoxy-2-propanol

Fish toxicity, *Leuciscus idus* (golden orfe): 6812 mg/l (96 h)

Daphnia toxicity, EC50, *Daphnia magna* (Big water flea): 23300 mg/l (48 h)

Algae toxicity, ErC50, *Pseudokirchneriella subcapitata*: > 1000 mg/l (168 h)

Algae toxicity, EC50, *Pseudokirchneriella subcapitata*: > 1000 mg/l (168 h)

Bacteria toxicity, IC50:: > 1000 mg/l (3 h)

Method: OECD 209

2-butoxyethanol

Fish toxicity, LC50, *Oncorhynchus mykiss* (Rainbow trout): 1474 mg/l (96 h)

Method: OECD 203

Daphnia toxicity, EC50: 1550 mg/l (48 h)

Method: OECD 202

Algae toxicity, EC50, *Pseudokirchneriella subcapitata*: 1840 mg/l (72 h)

Method: OECD 201

Algae toxicity, NOEC, *Pseudokirchneriella subcapitata*: 286 mg/l (72 h)

Bacteria toxicity, EC0, *Pseudomonas putida*: 700 mg/l (16 h)

reaction mass of

**α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and
 α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)**

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 2,8 mg/l (96 h)

Method: OECD 203

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 4 mg/l (48 h)

Algae toxicity, EC50: > 9 mg/l (72 h)

Aquatic plants, Pseudokirchneriella subcapitata: > 100 mg/l (72 h)

Method: OECD 201

, EC50, Activated sludge: > 1000 (3 h)

Method: OECD 209

paraffins(oil), C5-C20

Fish toxicity, LC50: > 5000 mg/l (96 h)

2-Methyl-4-isothiazolin-3-on

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 4,77 mg/l (96 h)

Daphnia toxicity, EC50, Daphnia magna: 0,93 mg/l (48 h)

Bacteria toxicity, EC50, Pseudomonas putida: 2,3 mg/l (16 h)

Method: Noack

Lab., BPZ61221

Algae toxicity, EC50, Selenastrum capricornutum: 0,158 mg/l (72 h)

mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon[EG-Nr 247-500-7]/

2-Methyl-3(2H)-isothiazolon[EG-Nr.220-239-6] (3:1)

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 0,188 mg/l (96 h)

Very toxic to aquatic organisms.

Daphnia toxicity, EC50, Daphnia magna: 0,1 mg/l (48 h)

Very toxic to aquatic organisms.

Shellfish toxicity , EC50: 1,07 mg/l 0,18 - 13 mg/l (48 h)

Shellfish toxicity , LC50:: 0,56 mg/l 0,56 - 0,56 mg/l (48 h)

Algae toxicity, EC50, Selenastrum capricornutum: 0,027 mg/l (72 h)

Method: OECD 201

2-dimethylaminoethanol

Fish toxicity, LC50, Leuciscus idus (golden orfe): 146,6 mg/l (96 h)

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 98,4 mg/l (48 h)

Algae toxicity, EC50, Scenedesmus subspicatus: 66,1 mg/l (72 h)

Fish toxicity, LC50, Pimephales promelas: 81 mg/l (96 h)

, EC20:: > 1000 (30 min.); evaluation: Technically correct releases of minimal concentrations to adapted biological sewage plants, will not disturb the biodegradability of activated sludge.

Long-term Ecotoxicity

1-methoxy-2-propanol

Algae toxicity, ErC50, Pseudokirchneriella subcapitata: > 1000 mg/l (168 h)

2-butoxyethanol

Daphnia toxicity, NOEC, Daphnia magna (Big water flea): 100 mg/l (21 D)

OECD 211

Fish toxicity, NOEL:, Brachydanio rerio (zebra-fish): > 100 mg/l (21 D)

Method: OECD 204

2-Methyl-4-isothiazolin-3-on

Daphnia toxicity, NOEC, Daphnia magna: 0,04 mg/l (21 D)

Method: OECD 211

mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon[EG-Nr 247-500-7]/

2-Methyl-3(2H)-isothiazolon[EG-Nr.220-239-6] (3:1)

Fish toxicity, NOEC, Oncorhynchus mykiss (Rainbow trout): 0,098 mg/l (28 D)

Method: OECD 210

Daphnia toxicity, NOEC, Daphnia magna (Big water flea): 0,004 mg/l (21 D)

Method: OECD 211

Algae toxicity, NOEC, Pseudokirchneriella subcapitata: 0,0012 mg/l (72 h)

Method: OECD 201

Bacteria toxicity, EC50:: 7,92 mg/l (3 h)

Method: OECD 209

12.2. Persistence and degradability

1-methoxy-2-propanol

Biodegradation: 96 % (28 D)

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

2-butoxyethanol

Biodegradation: 90,4 % (28 D)

α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω

-hydroxypoly(oxyethylene) and

α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3

-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

Biodegradation:

Method: OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C

mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon[EG-Nr 247-500-7]/

2-Methyl-3(2H)-isothiazolon[EG-Nr.220-239-6] (3:1)

, Biodegradation: < 50 % (10 D)

2-dimethylaminoethanol

Theoretical oxygen demand (ThOD):: 60 %

Method: Closed bottle test

: 1050 mg O₂/g

Biodegradation: > 90 % (13 D)

12.3. Bioaccumulative potential

1-methoxy-2-propanol

Partition coefficient: n-octanol/water: -0,437

Bioaccumulation: evaluation Does not bioaccumulate.

2-butoxyethanol

Partition coefficient: n-octanol/water: 0,81

Method: OECD 107

reaction mass of

**α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and
 α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)**

Partition coefficient: n-octanol/water: -1,3 - 5,9

2-Methyl-4-isothiazolin-3-on

Partition coefficient: n-octanol/water: -0,486

mixture of 5-Chlor-2-methyl-3(2H)-isothiazolon[EG-Nr 247-500-7]/

2-Methyl-3(2H)-isothiazolon[EG-Nr.220-239-6] (3:1)

Partition coefficient: n-octanol/water: 0,401

2-dimethylaminoethanol

Partition coefficient: n-octanol/water: -0,55

Bioaccumulative potential:

No indication of bioaccumulation potential.

Bioconcentration factor (BCF)

1-methoxy-2-propanol

Bioconcentration factor (BCF): < 100

2-butoxyethanol

Bioconcentration factor (BCF): 3,2

reaction mass of

**α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and
 α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)**

Bioconcentration factor (BCF), Oncorhynchus mykiss (Rainbow trout): 34

Method: OECD 305

12.4. Mobility in soil

, Koc:: 2,82

, log Koc:: 0,45

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

SECTION 13 Disposal considerations

13.1 Waste treatment methods

No dangerous waste according to the European waste catalogue (2008/98/EG). If recycling is not possible, wastes must be eliminated according to the provisions of the local authorities.

Do not dispose by the sewage.

List of proposed waste codes/waste designations in accordance with EWC

080111* Waste paint and varnish containing organic solvents or other dangerous substances

*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Appropriate disposal / Package

Recommendation

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14 Transport information

This mixture is not classified as dangerous according to international transport regulations (ADR/RID, IMDG, ICAO/IATA).

No dangerous good in sense of this transport regulation.

14.1 UN number

Not applicable.

14.2 Proper shipping name

ADR/RID / IMDG / IATA

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Labelling of environmentally dangerous substances

ADR/RID / IMDG / IATA

Not applicable.

Marine Pollutant

Not applicable.

14.6 Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

Further information

Land transport (ADR/RID)

tunnel restriction code -

Sea transport (IMDG)

EmS-No. Not applicable.

Air transport (ICAO-TI / IATA-DGR)

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15 Regulatory information

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

EU legislation

Directive 2010/75/EU on industrial emissions

VOC-value (in g/L): 172,9

National regulations

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Other regulations, restrictions and prohibition regulations

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16 Other information

Full text of classification in section 3:

Acute Tox. 4 / H302	Acute toxicity (oral) Harmful if swallowed.
Acute Tox. 4 / H312	Acute toxicity (dermal) Harmful in contact with skin.
Acute Tox. 4 / H332	Acute toxicity (inhalative) Harmful if inhaled.
Skin Irrit. 2 / H315	skin corrosion/irritation Causes skin irritation.
Eye Irrit. 2 / H319	Serious eye damage/eye irritation Causes serious eye irritation.
Flam. Liq. 3 / H226	Flammable liquids Flammable liquid and vapour.
STOT SE 3 / H336	Specific target organ toxicity (single exposure) May cause drowsiness or dizziness.
Skin Sens. 1A / H317	Respiratory or skin sensitisation May cause an allergic skin reaction.
Aquatic Chronic 2 / H411	Hazardous to the aquatic environment Toxic to aquatic life with long lasting effects.
Asp. Tox. 1 / H304	Aspiration hazard May be fatal if swallowed and enters airways.
Acute Tox. 3 / H331	Acute toxicity (inhalative) Toxic if inhaled.
Skin Corr. 1B / H314	skin corrosion/irritation Causes severe skin burns and eye damage.
Eye Dam. 1 / H318	Serious eye damage/eye irritation Causes serious eye damage.
STOT SE 3 / H335	Specific target organ toxicity (single exposure)
Skin Sens. 1 / H317	Respiratory or skin sensitisation May cause an allergic skin reaction.
Aquatic Acute 1 / H400	Hazardous to the aquatic environment Very toxic to aquatic organisms.
Acute Tox. 3 / H301	Acute toxicity (oral) Toxic if swallowed.
Acute Tox. 3 / H311	Acute toxicity (dermal) Toxic in contact with skin.
Acute Tox. 2 / H330	Acute toxicity (inhalative) Fatal if inhaled.
Aquatic Chronic 1 / H410	Hazardous to the aquatic environment Very toxic to aquatic life with long lasting effects
Acute Tox. 2 / H310	Acute toxicity (dermal) Fatal in contact with skin.
Skin Corr. 1C / H314	skin corrosion/irritation Causes severe skin burns and eye damage.

Classification procedure

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Skin Irrit. 2	Skin corrosion/irritation	Calculation method.
Eye Irrit. 2	Serious eye damage/eye irritation	Calculation method.
Skin Sens. 1	Respiratory or skin sensitisation	Calculation method.

Abbreviations and acronyms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL	Occupational Exposure Limit Value
BLV	Biological Limit Value
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic and Reprotoxic
DIN	German Institute for Standardization / German industrial standard
DNEL	Derived No-Effect Level
EAKV	European Waste Catalogue Directive

EC	Effective Concentration
EC	European Community
EN	European Standard
IATA-DGR	International Air Transport Association – Dangerous Goods Regulations
IBC Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code	International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
LC	Lethal Concentration
LD	Lethal Dose
MARPOL	Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD	Organisation for Economic Cooperation and Development
PBT	persistent, bioaccumulative, toxic
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
IMDG	Code International Maritime Code for Dangerous Goods
ISO	International Organization for Standardization
VOC	Volatile Organic Compounds
vPvB	very persistent and very bioaccumulative

Additional information

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in chapter 1.

It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.

We exclude each liability for damages, that can appear in improper intercourse or contact with these chemicals.

This security data sheet replaces all previous editions. Validly from edition date.

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