SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

MD-met (Part A)
Article number: MET

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

1.2.1 Relevant uses

Adhesive

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Marston Domsel GmbH
Bergheimer Str. 15
53909 Zülpich / GERMANY
Phone +49 (0) 22 52 94 15 0
Fax +49 (0) 22 52 17 44
Homepage www.marston-domsel.de
E-mail info@marston-domsel.de

Address enquiries to

Technical information info@marston-domsel.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Eye Irrit. 2: H319 Causes serious eye irritation.
Skin Irrit. 2: H315 Causes skin irritation.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects.
Muta. 2: H341 Suspected of causing genetic defects.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms



Signal word WARNING

Contains: Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)

2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane

2,3-epoxypropyl o-tolyl ether

Hazard statements
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.
H341 Suspected of causing genetic defects.

Precautionary statements
P201 Obtain special instructions before use.
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
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.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/national regulation.

Special labelling EUH205 Contains epoxy constituents. May produce an allergic reaction.

2.3 Other hazards

Human health dangers People who are allergic to epoxide should avoid the use of the product.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
60 - 65	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)
	CAS: 25068-38-6, EINECS/ELINCS: 500-033-5, EU-INDEX: 603-074-00-8
	GHS/CLP: Eye Irrit. 2: H319 - Skin Irrit. 2: H315 - Skin Sens. 1: H317 - Aquatic Chronic 2: H411
15 - 25	Aluminium powder (stabilized)
	CAS: 7429-90-5, EINECS/ELINCS: 231-072-3, EU-INDEX: 013-002-00-1
	GHS/CLP: Water-react. 2: H261 - Flam. Sol. 1: H228
5 - 10	Barium sulfate
	CAS: 7727-43-7, EINECS/ELINCS: 231-784-4
5 - 10	2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane
	CAS: 1675-54-3, EINECS/ELINCS: 216-823-5, EU-INDEX: 603-073-00-2, Reg-No.: 01-2119456619-26
	GHS/CLP: Skin Irrit. 2: H315 - Skin Sens. 1: H317 - Eye Irrit. 2: H319 - Aquatic Chronic 2: H411
1 - 5	Dimethyl siloxane, reaction product with silica
	CAS: 67762-90-7
1 - < 5	2,3-epoxypropyl o-tolyl ether
	CAS: 2210-79-9, EINECS/ELINCS: 218-645-3, EU-INDEX: 603-056-00-x, Reg-No.: 01-2119966907-18-XXXX
	GHS/CLP: Skin Irrit. 2: H315 - Skin Sens. 1A: H317 - Muta. 2: H341 - Aquatic Chronic 2: H411

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Change soaked clothing immediately.

Inhalation Remove the victim into fresh air and keep him calm.
In the event of symptoms seek medical treatment.

Skin contact When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion Consult a doctor immediately.
Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media foam, dry powder, water spray jet, carbon dioxide

Extinguishing media that must not be used Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Wear full protective suit.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protective clothing.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. general-purpose binder).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid spilling or spraying in enclosed areas.

Keep away from all sources of ignition - Refrain from smoking.

Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Use barrier skin cream.
Contaminated work clothing should not be allowed out of the workplace.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Do not store together with food.
Do not store together with acids.
Do not store together with oxidizing agents.

Keep container tightly closed.
Keep container in a well-ventilated place.
Protect from heat/overheating.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Barium sulfate
CAS: 7727-43-7, EINECS/ELINCS: 231-784-4
Long-term exposure: 10 mg/m³, inhabale dust; respirable dust: 4 mg/m³
Aluminium powder (stabilized)
CAS: 7429-90-5, EINECS/ELINCS: 231-072-3, EU-INDEX: 013-002-00-1
Long-term exposure: 10 mg/m³, inhalable dust (respirable dust: 4 mg/m³)
Dimethyl siloxane, reaction product with silica
CAS: 67762-90-7
Long-term exposure: 6 mg/m³, total inhalable dust

DNEL

Substance
2,3-epoxypropyl o-tolyl ether, CAS: 2210-79-9
Industrial, dermal, Long-term - systemic effects: 6 mg/kg bw/d (AF=100).
Industrial, inhalative, Acute - systemic effects: 42.24 mg/m³ (AF=12.5).
Industrial, inhalative, Long-term - systemic effects: 21.12 mg/m³ (AF=25).
general population, oral, Long-term - systemic effects: 3 mg/kg bw/d (AF=200).
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane, CAS: 1675-54-3
Industrial, dermal, Long-term - systemic effects: 0.75 mg/kg bw/d (AF=100).
Industrial, inhalative, Long-term - systemic effects: 4.93 mg/m³ (AF=12.5).
general population, inhalative, Long-term - systemic effects: 0,87 mg/m³.
general population, oral, Long-term - systemic effects: 0.5 g/kg bw/d (AF=100).
general population, dermal, Long-term - systemic effects: 89.3 µg/kg bw/d (AF=200).
general population, inhalative, Long-term - systemic effects: 0.87 mg/m³ (AF=25).

PNEC

Substance
2,3-epoxypropyl o-tolyl ether, CAS: 2210-79-9
soil, 0.012 mg/kg dw.
sediment (seawater), 0.004 mg/kg dw.
sediment (freshwater), 0.039 mg/kg dw.
sewage treatment plants (STP), 10 µg/L (AF=10).
freshwater, 0.28 µg/L (AF=10).
freshwater, 2.8 µg/L (AF=1000).
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane, CAS: 1675-54-3
oral (food), 11 mg/kg food (AF=90).
soil, 0,065 mg/kg soil dw.
sediment (seawater), 0,034 mg/kg sediment dw.
sediment (freshwater), 0,341 mg/kg sediment dw.
sewage treatment plants (STP), 10 mg/L (AF=10).
seawater, 0.001 mg/L (AF=500).
freshwater, 0.006 mg/L (AF=50).

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	safety glasses (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. In full contact: > 0,4 mm/ Butyl rubber, >480 min (EN 374-1/-2/-3). In splash contact: > 0,4 mm/ butyl rubber, > 120 min (EN 374)
Skin protection	light protective clothing
Other	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier. Do not breathe vapour/spray. Avoid contact with eyes and skin.
Respiratory protection	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, combination filter A-P1. (DIN EN 14387)
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	pasty
Color	silver-grey
Odor	mild
Odour threshold	No information available.
pH-value	No information available.
pH-value [1%]	No information available.
Boiling point [°C]	No information available.
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	No information available.
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/ml]	1,35 - 1,45
Bulk density [kg/m³]	not applicable
Solubility in water	insoluble
Partition coefficient [n-octanol/water]	No information available.
Viscosity	78000 - 87000 cP (25°C)
Relative vapour density determined in air	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Autoignition temperature [°C]	No information available.
Decomposition temperature [°C]	> 200

9.2 Other information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with amines.
Reactions with acids.
Reactions with alkalies (lyes).

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product
ATE-mix, oral, > 2000 mg/kg bw.

Substance
Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6
LD50, dermal, Rabbit: 22800 mg/kg bw (GESTIS).
LD50, oral, Rat: 11400 mg/kg bw (GESTIS).
Barium sulfate, CAS: 7727-43-7
LD50, oral, Rat: > 2000 mg/kg (Lit.).
Dimethyl siloxane, reaction product with silica, CAS: 67762-90-7
LD50, oral, Rat: > 5000 mg/kg.
2,3-epoxypropyl o-tolyl ether, CAS: 2210-79-9
LD50, dermal, Rat: > 2000 mg/kg.
LD50, oral, Rat: > 5000 mg/kg.
LC50, inhalative, Rat: 6,09 mg/l/4h.
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane, CAS: 1675-54-3
LD50, dermal, Rabbit: > 5000 mg/kg.
LD50, oral, Rat: > 5000 mg/kg.

Serious eye damage/irritation
Toxicological data of complete product are not available.
Irritant
Calculation method

Skin corrosion/irritation
Toxicological data of complete product are not available.
Irritant
Calculation method

Respiratory or skin sensitisation
Toxicological data of complete product are not available.
May cause an allergic skin reaction.
Calculation method

Specific target organ toxicity — single exposure
Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure
Based on the available information, the classification criteria are not fulfilled.

Mutagenicity
Based on the available information, the classification criteria are fulfilled.
Suspected of causing genetic defects.
Calculation method

Reproduction toxicity
Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity
Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard
Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Aluminium powder (stabilized), CAS: 7429-90-5
NOEC, (72h), Selenastrum capricornutum: >100 mg/L (IUCLID).
Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700), CAS: 25068-38-6
LC50, (96h), Pimephales promelas: 3,1 mg/l (Lit.).
EC50, (48h), Daphnia magna: 1,4-1,7 mg/l (Lit.).
IC50, Bacteria: > 42,6 mg/l/18h (Lit.).
Barium sulfate, CAS: 7727-43-7
EC50, (48h), Daphnia magna: 32 mg/l (Lit.).
Dimethyl siloxane, reaction product with silica, CAS: 67762-90-7
EC0, (96h), Brachidanio rerio: > 10000 mg/l (OECD 203).
EC0, (24h), Daphnia magna: > 1000 mg/l (OECD 202).
ErC50, (72h), Scenedesmus subspicatus: > 10000 mg/l (OECD 201).
2,3-epoxypropyl o-tolyl ether, CAS: 2210-79-9
LC50, (96h), Oncorhynchus mykiss: 7,5 mg/l.
LC50, (96h), Oncorhynchus mykiss: 2,8 - 5,6 mg/l.
EC50, (48h), Daphnia magna: 3,3 mg/l.
IC50, Bacteria: > 100 mg/l.
2,2'-[(1-Methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane, CAS: 1675-54-3
LC50, (96h), Oncorhynchus mykiss: 1,3 mg/L (OECD 203).
LC50, (96h), fish: 2 mg/L.
EC50, (48h), Water microorganisms: 1.8 mg/L.
EC50, (48h), Daphnia magna: 2,1 mg/L (OECD 202).
NOEC, (21d), Daphnia magna: 0,3 mg/L (OECD 211).
ErC50, (72h), Algae: 11 mg/L.

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

Ecotoxicological data are not available.
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.

Waste no. (recommended) 080409*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended) 150110* packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID 3082

Inland navigation (ADN) 3082

Marine transport in accordance with IMDG 3082

Air transport in accordance with IATA 3082

14.2 UN proper shipping name

Transport by land according to ADR/RID Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin)

- Classification Code M6

- Label

- ADR LQ 5 l

- ADR 1.1.3.6 (8.6) Transport category (tunnel restriction code) 3 (-)

Inland navigation (ADN) Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin)

- Classification Code M6

- Label

Marine transport in accordance with IMDG Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin)

- EMS F-A, S-F

- Label

- IMDG LQ 5 l

Air transport in accordance with IATA Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A Epoxy resin)

- Label

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	9 (N)
Inland navigation (ADN)	9 (N)
Marine transport in accordance with IMDG	9
Air transport in accordance with IATA	9

14.4 Packing group

Transport by land according to ADR/RID	III
Inland navigation (ADN)	III
Marine transport in accordance with IMDG	III
Air transport in accordance with IATA	III

14.5 Environmental hazards

Transport by land according to ADR/RID	yes
Inland navigation (ADN)	yes
Marine transport in accordance with IMDG	MARINE POLLUTANT
Air transport in accordance with IATA	yes

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

No information available.

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2020)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	not applicable

15.2 Chemical safety assessment

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

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H228 Flammable solid.
H261 In contact with water releases flammable gases.
H341 Suspected of causing genetic defects.
H411 Toxic to aquatic life with long lasting effects.
H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Customs Tariff 35061000

Classification procedure
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects. (Calculation method)
Muta. 2: H341 Suspected of causing genetic defects. (Calculation method)

Modified position
SECTION 8 been added: Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

MD-met (Part B)
Article number: MET

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

1.2.1 Relevant uses

Adhesive

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Marston Domsel GmbH
Bergheimer Str. 15
53909 Zülpich / GERMANY
Phone +49 (0) 22 52 94 15 0
Fax +49 (0) 22 52 17 44
Homepage www.marston-domsel.de
E-mail info@marston-domsel.de

Address enquiries to

Technical information info@marston-domsel.de

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Skin Irrit. 2: H315 Causes skin irritation.
Eye Irrit. 2: H319 Causes serious eye irritation.
Skin Sens. 1B: H317 May cause an allergic skin reaction.
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms

Signal word WARNING

Contains: 3-Aminopropyltriethoxysilane

Mercaptan Polymer

Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
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.
P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards none

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
60 - 70	Mercaptan Polymer
	CAS: 72244-98-5, EINECS/ELINCS: 701-196-7, Reg-No.: 01-2120118957-46
	GHS/CLP: Skin Sens. 1B: H317 - Aquatic Chronic 3: H412
20 - 25	Calcium carbonate
	CAS: 471-34-1, EINECS/ELINCS: 207-439-9
5 - 10	Benzyl alcohol
	CAS: 100-51-6, EINECS/ELINCS: 202-859-9, EU-INDEX: 603-057-00-5
	GHS/CLP: Acute Tox. 4: H302 H332 - Eye Irrit. 2: H319
5 - 10	2,4,6-Tris(dimethylaminomethyl)phenol
	CAS: 90-72-2, EINECS/ELINCS: 202-013-9, EU-INDEX: 603-069-00-0
	GHS/CLP: Acute Tox. 4: H302 - Eye Irrit. 2: H319 - Skin Irrit. 2: H315
0.5 - 2	3-Aminopropyltriethoxysilane
	CAS: 919-30-2, EINECS/ELINCS: 213-048-4, EU-INDEX: 612-108-00-0, Reg-No.: 01-2119480479-24
	GHS/CLP: Acute Tox. 4: H302 - Skin Corr. 1B: H314 - Skin Sens. 1: H317 - Eye Dam. 1: H318

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Change soaked clothing.

Inhalation Ensure supply of fresh air.
In the event of symptoms seek medical treatment.

Skin contact In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical advice.

Ingestion Get medical advice.
Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.

5.3 Advice for firefighters

Do not inhale explosion and/or combustion gases.
Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. general-purpose binder).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures necessary if used correctly.

Do not eat, drink, smoke or take drugs at work.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Do not store together with food.
Do not store together with oxidizing agents.
Do not store together with acids.

Keep container in a well-ventilated place.
Keep container tightly closed.
Keep in a cool place.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Calcium carbonate
CAS: 471-34-1, EINECS/ELINCS: 207-439-9
Long-term exposure: 10 mg/m³, inhalable dust

DNEL

Substance
Mercaptan Polymer, CAS: 72244-98-5
Industrial, dermal, Long-term - systemic effects: 2.7 mg/kg bw/d (AF=90).
Industrial, inhalative, Long-term - systemic effects: 22 mg/m³ (AF=6).
general population, inhalative, Long-term - systemic effects: 6.52 mg/m³(AF=10).
general population, oral, Long-term - systemic effects: 1.9 mg/kg bw/d (AF=40).
general population, dermal, Long-term - systemic effects: 1.61 mg/kg bw/d (AF=150).
3-Aminopropyltriethoxysilane, CAS: 919-30-2
Industrial, dermal, Long-term - systemic effects: 8.3 mg/kg bw/d (AF= 6).
Industrial, inhalative, Long-term - systemic effects: 59 mg/m³ (AF= 6).
general population, dermal, Long-term - systemic effects: 5 mg/kg bw/d (AF= 10).
general population, inhalative, Long-term - systemic effects: 17.4 mg/m³ (AF= 10).

PNEC

Substance
Mercaptan Polymer, CAS: 72244-98-5
soil, 23 µg/kg dw.
sediment (seawater), 32 µg/kg dw.
sediment (freshwater), 322 µg/kg dw.
sewage treatment plants (STP), 10 mg/L (AF=100).
seawater, 7 µg/L (AF=500).
freshwater, 70 µg/L (AF=50).
3-Aminopropyltriethoxysilane, CAS: 919-30-2
soil, 0,05 mg/kg dw.
sediment (seawater), 0,12 mg/kg dw.
sediment (freshwater), 1,2 mg/kg dw.
sewage treatment plants (STP), 13 mg/l (AF=1).
seawater, 0,033 mg/l (AF=10 000).
freshwater, 0,33 mg/l (AF=1000).

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. In full contact: 0,7 mm/ Butyl rubber, >480 min (EN 374-1/-2/-3). In splash contact: 0,7 mm/ butyl rubber, > 120 min (EN 374)
Skin protection	not applicable
Other	Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, combination filter A-P1. (DIN EN 14387)
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	See SECTION 6+7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	pasty
Color	grey
Odor	characteristic
Odour threshold	No information available.
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	No information available.
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	No information available.
Density [g/ml]	1,35 - 1,45
Bulk density [kg/m³]	not applicable
Solubility in water	virtually insoluble
Partition coefficient [n-octanol/water]	No information available.
Viscosity	No information available.
Relative vapour density determined in air	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Autoignition temperature [°C]	No information available.
Decomposition temperature [°C]	> 150

9.2 Other information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with amines.
Reactions with acids and strong oxidizing agents.
Reactions with alkalies (lyes).

10.4 Conditions to avoid

See SECTION 7.2.
Strong heating.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Substance
2,4,6-Tris(dimethylaminomethyl)phenol, CAS: 90-72-2
LD50, dermal, Rabbit: 1280 mg/kg (IUCLID).
LD50, oral, Rat: 1916-2455 mg/kg (IUCLID).
Calcium carbonate, CAS: 471-34-1
LD50, oral, Rat: 6450 mg/kg bw (IUCLID).
LC0, inhalative, Rat: 0,0812 mg/L (90 min) (IUCLID).
Mercaptan Polymer, CAS: 72244-98-5
LD50, dermal, Rabbit: > 10 200 mg/kg bw.
LD50, oral, Rat: 2600 mg/kg bw.
LC50, inhalative, Rat: > 0.1 mg/L (Air).
3-Aminopropyltriethoxysilane, CAS: 919-30-2
LD50, dermal, Rabbit: 4290 mg/kg bw.
LD50, oral, Rat (female): 1570 mg/kg bw.
LD50, oral, Rat (male): 2830 mg/kg bw.
LC50, inhalative, Rat (female): 16 ppm/6h (OECD 403).
LC50, inhalative, Rat (male): 5 ppm/6h (OECD 403).
Benzyl alcohol, CAS: 100-51-6
LD50, dermal, Rabbit: 2000 mg/kg.
LD50, oral, Rat: 1230 mg/kg.
LC50, inhalative, Rat: 4,178 mg/l /4h.

Serious eye damage/irritation
Toxicological data of complete product are not available.
Irritant
Calculation method

Skin corrosion/irritation
Toxicological data of complete product are not available.
Irritant
Calculation method

Respiratory or skin sensitisation
Toxicological data of complete product are not available.
May cause an allergic skin reaction.
Calculation method

Specific target organ toxicity — single exposure
Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure
Based on the available information, the classification criteria are not fulfilled.

Mutagenicity
Based on the available information, the classification criteria are not fulfilled.

Reproduction toxicity
Based on the available information, the classification criteria are not fulfilled.

Carcinogenicity
Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard
Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists.

SECTION 12: Ecological information

12.1 Toxicity

Substance
Mercaptan Polymer, CAS: 72244-98-5
LC50, (96h), Danio rerio: 87 mg/L.
EC50, (48h), Daphnia magna: 12 mg/L.
EC50, (72h), Desmodesmus subspicatus: > 733 mg/L.
NOEC, (21d), Daphnia magna: 3.5 mg/L.
NOEC, (72h), Desmodesmus subspicatus: 388 mg/L.
3-Aminopropyltriethoxysilane, CAS: 919-30-2
LC50, (96h), Brachidanio rerio: > 934 mg/l.
EC50, (72h), Desmodesmus subspicatus: > 1000 mg/l.
EC50, (48h), Daphnia magna: 331 mg/l.
Benzyl alcohol, CAS: 100-51-6
LC50, (96h), Pimephales promelas: 460 mg/l.
EC50, (24h), Daphnia magna: 400 mg/l.
EC0, (96h), Scenedesmus quadricauda (algea): 640 mg/l.
EC10, (16h), Pseudomonas putida: 658 mg/l.

12.2 Persistence and degradability

Behaviour in environment compartments not determined

Behaviour in sewage plant not determined

Biological degradability

12.3 Bioaccumulative potential

Product has having no bioaccumulation potential.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required or not conducted.

12.6 Other adverse effects

Ecotoxicological data are not available.
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.

Waste no. (recommended) 080409*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended) 150110* packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA 3334

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA Aviation regulated liquid, n.o.s. (Polymercaptan)

- Label

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA 9

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	III

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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

No information available.

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2020)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011).
- Observe employment restrictions for people	Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.
- VOC (2010/75/CE)	not applicable

15.2 Chemical safety assessment

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

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H412 Harmful to aquatic life with long lasting effects.
H302+H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H314 Causes severe skin burns and eye damage.
H302 Harmful if swallowed.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Customs Tariff 35061000

Classification procedure

Skin Irrit. 2: H315 Causes skin irritation. (Calculation method)
Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
Skin Sens. 1B: H317 May cause an allergic skin reaction. (Calculation method)
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)

Modified position

SECTION 2 been added: Skin Sens. 1B

SECTION 2 deleted: Skin Sens. 1

SECTION 14 been added: Aviation regulated liquid, n.o.s. (Polymercaptan)

SECTION 14 deleted: Triethylene Tetramine, solution

SECTION 14 been added: not classified as "Dangerous Goods"

SECTION 14 deleted: Triethylene Tetramine, solution

SECTION 14 been added: no dangerous goods

SECTION 14 deleted: Triethylenetetramine, solution