HIT-RE 500 V3

Safety Data Sheet

Compiled according to GB/T 16483, GB/T 17519

Version:3.1

Revision date: 2025/11/27 Issue date: 2025/11/27 Supersedes: 2022/11/15

SECTION 1 Chemical product and company identification

Product identifier

Product name	HIT-RE 500 V3
Product code	BU Anchor
Chemical Chinese name	锚固嵌缝剂 HIT-RE 500 V3
Chemical English name	Injection Mortar HIT-RE 500 V3
	
Recommended use of the chemical	For professional use only Composite mortar component for fasteners in the construction industry
Restricted use of the chemical	Restricted to professional users

Details of the supplier of the safety data sheet

Supplier

Hilti (China) Trading Co., Ltd.
耀元路 58 号环球都会广场 2 号楼 8 层
浦东新区
200126 上海
T +86 21 6016 7316

Department issuing data specification sheet

Hilti Entwicklungsgesellschaft mbH
Hiltistraße 6
86916 Kaufering - Deutschland
T +49 8191 90-0
product.compliance-anchors@hilti.com

Emergency telephone number

Emergency number

Emergency CONTACT (24-Hour-Number)
GBK GmbH Global Regulatory Compliance
+49 (0)6132-84463

Country	Organisation/Company	Address	Emergency number
China	中国境内化学事故应急咨询电话 / chemical accident emergency consultation service hotline (24/7)		+86 532 83889090

SECTION 2 Hazards identification

Emergency overview

Thixotropic paste. component A: grey, component B: Red. Amine-like. Non flammable. Corrosive vapours. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Use personal protective equipment as required. Equip

cleanup crew with proper protection. Ventilate area

GHS hazard classification

Health hazards	Acute toxicity (Oral), Category 5
	Skin corrosion/irritation, Category 1B
	Serious eye damage/eye irritation, Category 1
	Skin sensitization, Category 1
	Reproductive toxicity, Category 1B
	Specific target organ toxicity - Single exposure, Category 3, Respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment - Acute hazard, Category 2
	Hazardous to the aquatic environment - Chronic hazard, Category 2

Other hazards not mentioned above are Not applicable or No data is available.

Label elements

Hazard pictograms (GHS CN)

Signal word (GHS CN): Danger.

Hazard statements (GHS CN):

- H314 - Causes severe skin burns and eye damage
- H317 - May cause an allergic skin reaction
- H335 - May cause respiratory irritation
- H411 - Toxic to aquatic life with long lasting effects
- H360 - May damage fertility or the unborn child.

Precautionary statements (GHS CN)

Prevention measures:

- P262 - Do not get in eyes, on skin, or on clothing.
- P280 - Wear eye protection, protective clothing, protective gloves.

Incident response:

- P302+P352 - IF ON SKIN: Wash with plenty of water.
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Safe storage:

- P410+P403 - Protect from sunlight. Store in a well-ventilated place.

Disposal:

- P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Physical and chemical hazards

No additional information available

Health hazards

Causes severe skin burns and eye damage

May cause an allergic skin reaction

May cause respiratory irritation

May damage fertility or the unborn child	
Symptoms/effects	Causes severe skin burns and eye damage.
Symptoms/effects after eye contact	Causes serious eye damage.
Symptoms/effects after skin contact	May cause an allergic skin reaction.

Environmental hazards

Toxic to aquatic life with long lasting effects

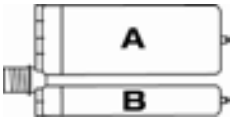
Other hazards

No additional information available

SECTION 3 Composition/information on ingredients

Comments

Component A: Epoxy resin, Reactive diluent, inorganic filler
Component B: Amine hardener, inorganic filler.



A: Ingredient(s)	Concentration or concentration ranges (w/w %)	CAS No.	Classification (GHS CN)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	25 - 40	1675-54-3	Skin corrosion/irritation, Category 2 Serious eye damage/eye irritation, Category 2A Skin sensitization, Category 1 Hazardous to the aquatic environment - Acute hazard, Category 2 Hazardous to the aquatic environment - Chronic hazard, Category 2
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	10 - 20	9003-36-5	Skin corrosion/irritation, Category 2 Skin sensitization, Category 1 Hazardous to the aquatic environment - Chronic hazard, Category 2
butanedioldiglycidyl ether	5 - 10	2425-79-8	Acute toxicity (Oral), Category 4 Acute toxicity (Dermal), Category 4 Acute toxicity (Inhalation), Category 4 Acute toxicity

			(Inhalation:dust,mist), Category 4 Skin corrosion/irritation, Category 2 Serious eye damage/eye irritation, Category 1 Skin sensitization, Category 1 Reproductive toxicity, Category 1B Hazardous to the aquatic environment - Acute hazard, Category 3 Hazardous to the aquatic environment - Chronic hazard, Category 3
1,3 Propanediol, 2 ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl)oxirane	5 - 10	30499-70-8	Skin corrosion/irritation, Category 1C Serious eye damage/eye irritation, Category 1 Skin sensitization, Category 1B Germ cell mutagenicity, Category 2 Reproductive toxicity, Category 1B Hazardous to the aquatic environment - Chronic hazard, Category 2
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	2.5 - 5	2530-83-8	Acute toxicity (Dermal), Category 5 Serious eye damage/eye irritation, Category 1 Hazardous to the aquatic environment - Acute hazard, Category 3 Hazardous to the aquatic environment - Chronic hazard, Category 3
B: Ingredient(s)	**Concentration or concentration ranges (w/w %)**	**CAS No.**	**Classification (GHS CN)**
2-methyl-1,5-pentanediamine	25 - 35	15520-10-2	Flammable liquids, Category 4 Acute toxicity (Oral), Category 4

			Acute toxicity (Inhalation:dust,mist), Category 4 Skin corrosion/irritation, Category 1 Serious eye damage/eye irritation, Category 1 Specific target organ toxicity - Single exposure, Category 3, Respiratory tract irritation
Phenol, styrenated	5 - 10	61788-44-1	Skin corrosion/irritation, Category 2 Skin sensitization, Category 1 Hazardous to the aquatic environment - Acute hazard, Category 1 Hazardous to the aquatic environment - Chronic hazard, Category 2
m-Xylylenediamine	5 - <8	1477-55-0	Acute toxicity (Oral), Category 4 Acute toxicity (Inhalation:dust,mist), Category 4 Skin corrosion/irritation, Category 1B Skin sensitization, Category 1 Hazardous to the aquatic environment - Acute hazard, Category 3 Hazardous to the aquatic environment - Chronic hazard, Category 3
2,4,6-tris(dimethylaminomethyl)phenol	1 - 2.5	90-72-2	Acute toxicity (Oral), Category 4 Skin corrosion/irritation, Category 2 Serious eye damage/eye irritation, Category 2 Hazardous to the aquatic environment - Acute hazard, Category 3
3-Aminopropyltriethoxy	1 - 2.5	919-30-2	Acute toxicity (Oral), Category 4

silan			Acute toxicity (Dermal), Category 5 Skin corrosion/irritation, Category 1B Skin sensitization, Category 1

SECTION 4 First-aid measures

Description of necessary first-aid measures

First-aid measures general	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible)
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	Wash with plenty of water/…. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get immediate medical advice/attention.
First-aid measures after eye contact	Get immediate medical advice/attention. Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist
First-aid measures after ingestion	Do not induce vomiting. Rinse mouth. Immediately call a POISON CENTER/doctor.

Most important symptoms/effects

Symptoms/effects	Causes severe skin burns and eye damage.
Symptoms/effects after eye contact	Causes serious eye damage.
Symptoms/effects after skin contact	May cause an allergic skin reaction.

Advices for first aid responders

Avoid all unnecessary exposure.

Notes for the doctor

Other medical advice or treatment	No additional information available

SECTION 5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Foam Dry powder Carbon dioxide Water spray Sand

Unsuitable extinguishing media	Do not use a heavy water stream

Specific hazards

Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide Carbon monoxide

Advice for firefighters and protective measures

Firefighting instructions	Use water spray or fog for cooling exposed containers Exercise caution when fighting any chemical fire Prevent fire fighting water from entering the environment
Protection during firefighting	Self-contained breathing apparatus Do not enter fire area without proper protective equipment, including respiratory protection

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Heat and ignition sources	Keep away from heat and direct sunlight
General measures	Spilled material may present a slipping hazard
Personal Precautions, Protective Equipment and Emergency Procedures	No additional information available

For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel

For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection
Emergency procedures	Ventilate area

Environmental precautions

Prevent entry to sewers and public waters

Notify authorities if liquid enters sewers or public waters

Avoid release to the environment

Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations.

After curing, the product can be disposed of with household waste

Methods and material for containment and cleaning up

Methods for cleaning	No additional information available
For containment	Collect spillage.

Prevention measures for secondary accidents

Prevention Measures for Secondary Accidents	No additional information available
Other information	Dispose of materials or solid residues at an authorized site

SECTION 7 Handling and storage

Handling

Precautions for safe handling	Wear personal protective equipment Avoid contact with skin and eyes Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work Avoid contact during pregnancy/while nursing
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
Local and general ventilation	No additional information available

Storage

Storage conditions	Protect from sunlight. Store in a well-ventilated place.
Technical measures	Comply with applicable regulations
Material used in packaging/containers	No additional information available
Incompatible products	Strong bases. Strong acids.
Incompatible materials	Sources of ignition. Direct sunlight.
Storage temperature	5 - 25 °C
Heat and ignition sources	Keep away from heat and direct sunlight

SECTION 8 Exposure controls / Personal protection equipment

Occupational exposure limits

No additional information available

Biological limit values

No additional information available

Monitoring methods

No additional information available

Appropriate engineering controls

Ensure good ventilation of the work station

Personal protective equipment

Personal protective equipment	Safety glasses Gloves Protective clothing Avoid all unnecessary exposure
Environmental exposure controls	Avoid release to the environment.
Consumer exposure controls	Avoid contact during pregnancy/while nursing.
Other information	Do not eat, drink or smoke during use
Hand protection	Wear protective gloves. The permeation time is not the maximum wearing time!

Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function's effective duration.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves.	Nitrile rubber (NBR).	4 (> 120 minutes).	> 0,2		EN ISO 374.

Eye protection	Wear security glasses which protect from splashes
Skin and body protection	No additional information available
Respiratory protection	No additional information available

Personal protective equipment symbol(s)

SECTION 9 Physical and chemical properties

Physical state	Solid
Appearance	Thixotropic paste
Colour	component A: grey, component B: Red
Odour	characteristic,Amine-like
pH	(B)
Melting point	No data available
Freezing point	Not applicable
Boiling point	Not applicable
Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability	Non flammable.
Vapour pressure	No data available
Relative vapour density at 20° C	No data available
Density	1.31 - 1.45 g/cm³
Solubility	No data available
Partition coefficient n-octanol/water (Log Pow)	No data available
Viscosity, kinematic	31034.483 - 53435.115 mm²/s
Viscosity, dynamic	45 - 70 Pa•s
Lower explosion limit	No data available
Upper explosion limit	No data available
Radioactive	No

SECTION 10 Stability and reactivity

Chemical stability	Stable under normal conditions
Reactivity	Corrosive vapours
Possibility of hazardous reactions	No additional information available
Conditions to avoid	Direct sunlight. Extremely high or low temperatures

Incompatible materials	Strong acids Strong bases
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced Thermal decomposition generates : fume Carbon monoxide Carbon dioxide Corrosive vapours
Other properties	No additional information available

SECTION 11 Toxicological information

Acute toxicity

Acute toxicity (oral)	May be harmful if swallowed.
Acute toxicity (dermal)	No data available
Acute toxicity (inhalation)	No data available

HIT-RE 500 V3

ATE CN (oral) 2500 mg/kg bodyweight

2-methyl-1,5-pentanediamine (15520-10-2)	
LD50 oral rat	1690 mg/kg (Rat)
LD50 oral	1170 mg/kg (Rat)
LC50 Inhalation - Rat	4.9 mg/l

Phenol, styrenated (61788-44-1)	
LD50 oral rat	> 2500 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	158.31 mg/l/4h

m-Xylylenediamine (1477-55-0)	
LD50 oral rat	930 mg/kg
LD50 dermal rat	> 3100 mg/kg
LD50 dermal	> 3100 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	1.34 mg/l/4h

3-Aminopropyltriethoxysilan (919-30-2)	
LD50 oral rat	1.57 - 2.83 ml/kg (EPA OTS 798.1175, Rat, Male / female, Experimental value, Oral)
LD50 oral	1570 mg/kg
LD50 dermal rabbit	4.29 ml/kg (EPA OTS 798.1100, 24 h, Rabbit, Male / female, Experimental value, Dermal)
LD50 dermal	4290 mg/kg
LC50 Inhalation - Rat [ppm]	> 5 ppm (OECD 403: Acute Inhalation Toxicity, 6 h, Rat, Male, Experimental value, Inhalation (vapours))
LC50 Inhalation - Rat (Dust/Mist)	7.35 mg/l/4h

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
LD50 oral rat	8025 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	4250 mg/kg bodyweight (Rabbit; Experimental value; Equivalent or similar to OECD 402)

butanedioldiglycidyl ether (2425-79-8)	
LD50 oral rat	2980 mg/kg (Rat)

LD50 oral	1163 mg/kg (Rat; Exp. Key study ECHA)
LD50 dermal rat	> 2150 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal, 7 day(s))
LD50 dermal rabbit	1130 mg/kg (Rabbit)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LD50 oral rat	> 2000 mg/kg (Rat; OECD 420: Acute Oral toxicity - Acute Toxic Class Method; Experimental value)
LD50 oral	11400 mg/kg
LD50 dermal rat	> 2000 mg/kg (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
LD50 oral rat	> 5000 mg/kg bodyweight (Rat; ECHA)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; ECHA)

Skin corrosion/irritation

Skin corrosion/irritation: Causes severe skin burns.

HIT-RE 500 V3
pH: (B)

Serious eye damage/eye irritation

Serious eye damage/irritation: Causes serious eye damage.

HIT-RE 500 V3
pH: (B)

Respiratory or skin sensitisation

Respiratory or skin sensitisation: May cause an allergic skin reaction.

Germ cell mutagenicity

Germ cell mutagenicity: No data available

Carcinogenicity

Carcinogenicity: No data available

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
IARC group	3 - Not classifiable

Reproductive toxicity

Reproductive toxicity: May damage fertility or the unborn child.

STOT - single exposure

STOT - single exposure: May cause respiratory irritation.

2-methyl-1,5-pentanediamine (15520-10-2)	
STOT - single exposure	May cause respiratory irritation.

STOT - repeated exposure

STOT - repeated exposure: No data available

Aspiration hazard

Aspiration hazard	No data available

HIT-RE 500 V3

Viscosity, kinematic	31034.483 - 53435.115 mm²/s
Density	1.31 - 1.45 g/cm³

SECTION 12 Ecological information

Ecotoxicity

Ecology - water	Very toxic to aquatic life.
Hazardous to the aquatic environment, short-term (acute)	Toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	Toxic to aquatic life with long lasting effects.

2-methyl-1,5-pentanediamine (15520-10-2)	
LC50 - Fish [1]	130 mg/l (48 h, Leuciscus idus)
Partition coefficient n-octanol/water (Log Pow)	0.27 (Estimated value)

Phenol, styrenated (61788-44-1)	
LC50 - Fish [1]	5.6 mg/l
EC50 - Crustacea [1]	1.44 mg/l
BCF - Fish [1]	3246 l/kg (BCFBAF v3.01, Pisces, Fresh water, Weight of evidence, Fresh weight)
BCF - Fish [2]	3246 mg/l
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.1 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Partition coefficient n-octanol/water (Log Pow)	6.24 - 7.77 (Experimental value; OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method)

m-Xylylenediamine (1477-55-0)	
LC50 - Fish [1]	75 mg/l
EC50 - Crustacea [1]	15 mg/l
NOEC chronic crustacea	4.7 mg/l

3-Aminopropyltriethoxysilan (919-30-2)	
LC50 - Fish [1]	> 934 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	331 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 algae	> 1000 mg/l (EU Method C.3, 72 h, Scenedesmus subspicatus, Static system, Fresh water, Experimental value, GLP)
BCF - Fish [1]	3.4 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.7 (QSAR, 20 °C)

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
LC50 - Fish [1]	55 mg/l (96 h; Cyprinus carpio; Young)
LC50 - Fish [2]	237 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 - Crustacea [1]	473 - 710 mg/l (48 h; Daphnia magna)
Partition coefficient n-octanol/water (Log Pow)	-0.92 (Estimated value)

butanedioldiglycidyl ether (2425-79-8)	
LC50 - Fish [1]	24 mg/l (96 h; Pisces) ECHA
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.1 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	-0.27 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LC50 - Fish [1]	1.2 mg/l (96 h; Oncorhynchus mykiss; Lethal)
LC50 - Fish [2]	2.3 mg/l (96 h; Oncorhynchus mykiss; Nominal concentration)
EC50 - Crustacea [1]	2 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
Partition coefficient n-octanol/water (Log Pow)	≥ 2.918 (Experimental value; EU Method A.8: Partition Coefficient; 25 °C)

Persistence and degradability

HIT-RE 500 V3

Persistence and degradability Not established

Phenol, styrenated (61788-44-1)	
Biochemical oxygen demand (BOD)	0.000231 g O_2/g substance
Chemical oxygen demand (COD)	0.004827 g O_2/g substance

3-Aminopropyltriethoxysilan (919-30-2)	
Not rapidly degradable	Yes
Persistence and degradability	Not readily biodegradable in water

butanedioldiglycidyl ether (2425-79-8)	
Biochemical oxygen demand (BOD)	0.01982 g O_2/g substance

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Not rapidly degradable	Yes

Bioaccumulative potential

HIT-RE 500 V3

Bioaccumulative potential Not established

2-methyl-1,5-pentanediamine (15520-10-2)	
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4)
Partition coefficient n-octanol/water (Log Pow)	0.27 (Estimated value)

Phenol, styrenated (61788-44-1)	
Bioaccumulative potential	Bioaccumulative potential
BCF - Fish [1]	See section 12.1 on ecotoxicology3246 l/kg (BCFBAF v3.01, Pisces, Fresh water, Weight of evidence, Fresh weight)
BCF - Fish [2]	See section 12.1 on ecotoxicology3246 mg/l

Partition coefficient n-octanol/water (Log Pow)	6.24 - 7.77 (Experimental value; OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.1 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
3-Aminopropyltriethoxysilan (919-30-2)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500)
BCF - Fish [1]	See section 12.1 on ecotoxicology3.4 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.7 (QSAR, 20 °C)
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.92 (Estimated value)
butanedioldiglycidyl ether (2425-79-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.27 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.1 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Bioaccumulative potential	Low bioaccumulation potential (BCF < 500)
Partition coefficient n-octanol/water (Log Pow)	≥ 2.918 (Experimental value; EU Method A.8: Partition Coefficient; 25 °C)

Mobility in soil

HIT-RE 500 V3

Bioaccumulative potential Not established

2-methyl-1,5-pentanediamine (15520-10-2)	
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4)
Partition coefficient n-octanol/water (Log Pow)	0.27 (Estimated value)
Phenol, styrenated (61788-44-1)	
Bioaccumulative potential	Bioaccumulative potential
Surface tension	48.45 mN/m (20 °C, 90 %, OECD 115: Surface Tension of Aqueous Solutions)
Partition coefficient n-octanol/water (Log Pow)	6.24 - 7.77 (Experimental value; OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.1 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for mobility in soil.
3-Aminopropyltriethoxysilan (919-30-2)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500)
Partition coefficient n-octanol/water (Log Pow)	1.7 (QSAR, 20 °C)
Ecology - soil	No (test)data on mobility of the substance

	available.
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.92 (Estimated value)
butanedioldiglycidyl ether (2425-79-8)	
Surface tension	44.4 mN/m (20 °C, 90 %, EU Method A.5: Surface tension)
Partition coefficient n-octanol/water (Log Pow)	-0.27 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.1 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Highly mobile in soil.
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Bioaccumulative potential	Low bioaccumulation potential (BCF < 500)
Surface tension	59 mN/m (20 °C, 0.09 g/l)
Partition coefficient n-octanol/water (Log Pow)	⩾ 2.918 (Experimental value; EU Method A.8: Partition Coefficient; 25 °C)
Ecology - soil	No (test)data on mobility of the substance available.

Other adverse effects

Classification procedure (Ozone)	No data available
Other information	Avoid release to the environment.

Results of PBT and vPvB assessment

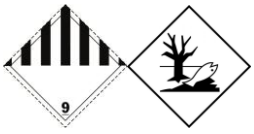
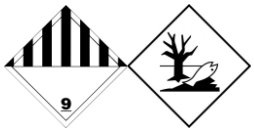
PBT	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
vPvB	This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 13 Disposal considerations

Waste treatment methods	No additional information available
Contaminated container and packaging	No additional information available
Additional information	No additional information available
Product/Packaging disposal recommendations	After curing, the product can be disposed of with household waste Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations
Ecological waste information	Avoid release to the environment.
Regional waste regulation	Disposal must be done according to official regulations

SECTION 14 Transport information

A:
In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
Special provision(s) applied : 375	Special provision(s) applied : 969	Special provision(s) applied : A197	Special provision(s) applied : 375
These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.			
14.1. UN number or ID number			
UN 3077	UN 3077	UN 3077	UN 3077
14.2. UN proper shipping name			
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	Environmentally hazardous substance, solid, n.o.s. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)
Transport document description			
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol), 9, III, (-)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol), 9, III	UN 3077 Environmentally hazardous substance, solid, n.o.s. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol), 9, III
14.3. Transport hazard class(es)			
9	9	9	9
			
14.4. Packing group			
III	III	III	III

ADR	IMDG	IATA	RID
14.5. Environmental hazards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
Environmentally hazardous substances derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg). The environmentally hazardous substance mark is therefore not required, as stated in the ADR regulation, section 5.2.1.8.1.			
not restricted according ADR Special Provision SP375, IATA-DGR Special Provision A197 and IMDG-Code 2.10.2.7			

B:

In accordance with IMDG / IATA

ADR	IMDG	IATA	RID
14.1. UN number			
UN 3259	UN 3259	UN 3259	UN 3259
14.2. UN proper shipping name			
AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	Amines, solid, corrosive, n.o.s. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)
Transport document description			
UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II, (E)	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II	UN 3259 Amines, solid, corrosive, n.o.s. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

A:

Overland transport

Classification code (ADR)	M7
Special provisions (ADR)	274, 335, 375, 601
Limited quantities (ADR)	5kg
Packing instructions (ADR)	P002, IBC08, LP02, R001
Mixed packing provisions (ADR)	MP10
Transport category (ADR)	3
Orange plates	
Tunnel restriction code (ADR)	-

Transport by sea

Special provisions (IMDG)	274, 335, 966, 967, 969
Limited quantities (IMDG)	5 kg
Packing instructions (IMDG)	LP02, P002
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-F
Stowage category (IMDG)	A
Stowage and handling (IMDG)	SW23
MFAG-No	171

Air transport

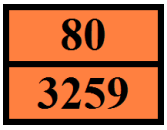
PCA packing instructions (IATA)	956
PCA max net quantity (IATA)	400kg
CAO packing instructions (IATA)	956
Special provisions (IATA)	A97, A158, A179, A197, A215

Rail transport

Special provisions (RID)	274, 335, 375, 601
Limited quantities (RID)	5kg
Packing instructions (RID)	P002, IBC08, LP02, R001

B:

Overland transport

Classification code (ADR)	C8
Special provisions (ADR)	274
Limited quantities (ADR)	1kg
Packing instructions (ADR)	P002, IBC08
Mixed packing provisions (ADR)	MP10
Transport category (ADR)	2
Orange plates	
Tunnel restriction code (ADR)	E

Transport by sea

Special provisions (IMDG)	274
Limited quantities (IMDG)	1 kg
Packing instructions (IMDG)	P002

EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B
Stowage category (IMDG)	A
MFAG-No	154

Air transport

PCA packing instructions (IATA)	859
PCA max net quantity (IATA)	15kg
CAO packing instructions (IATA)	863
Special provisions (IATA)	A3

Rail transport

Special provisions (RID)	274
Limited quantities (RID)	1kg
Packing instructions (RID)	P002, IBC08

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

Not applicable

14.6. Special precautions for user

Transport by sea

Special provisions (IMDG)	274
Limited quantities (IMDG)	1 kg
Packing instructions (IMDG)	P002
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B
Stowage category (IMDG)	A
Segregation (IMDG)	SGG18, SG35
MFAG-No	154

Air transport

PCA packing instructions (IATA)	859
PCA max net quantity (IATA)	15kg
CAO packing instructions (IATA)	863
Special provisions (IATA)	A3, A803

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15 Regulatory information

New Chemical Substance Environmental Management Registration Measures (MEE Order 12 of 2020)

Inventory of Existing Chemical Listed

Substances in China (IECSC)	
Regulations on the Safe Management of Hazardous Chemicals (Decree 591 of the State Council)	
Catalogue of Hazardous Chemicals (2015)	Listed
Identification of major hazard installations for dangerous chemicals (GB 18218)	Not listed
Catalogue of Severely Restricted Toxic Chemicals	Not listed
Catalogue of Explosive Precursor Dangerous Chemicals	Not listed
Catalogue of Hazardous Chemicals Prohibited from Inland Waterway Transport	Not listed
Law of the People's Republic of China on the Prevention and Control of Occupational Diseases	
Catalogue for Classification of Hazardous Factors of Occupational Diseases	Listed
List of Highly Toxic Substances	Not listed
Regulations on Administration of Chemicals Subjected to Supervision and Control	
Catalogue of Controlled Chemicals	Not listed
Regulation on the Administration of Precursor Chemicals (Decree 445 of the State Council)	
Catalogue of Precursor Chemicals	Not listed
Regulations on Administration of Ozone Depleting Substances (Decree 573 of the State Council)	
List of Ozone-Depleting Substances under Control in China	Not listed
Other domestic regulatory lists	
Dangerous Goods List (GB 12268)	Not listed
List of Export Control of Chemical Agents and Related Equipment and Technologies	Not listed
List of Goods Prohibited from Export or Import	Not listed
Inventory of Hazardous Chemicals under Key Supervision	Not listed

SECTION 16 Other information

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
IATA	International Air Transport Association
EC50	Median effective concentration
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Other information None

Section	Changed item	Change	Comments
	Emergency number.	Modified.	

SDS_CN_Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.