HIT-RE 100

Safety information for 2-Component-products

Issue date: 11/05/2020 Revision date: 11/05/2020 Supersedes: 11/07/2018 Version: 3.0

SECTION 1: Kit identification

1.1 Product identifier

Product name: HIT-RE 100

Product code: BU Anchor

1.2 Details of the supplier of the Safety information for 2-Component-products

Hilti Far East Private Ltd.
No 20 Harbour Drive,
#06-06/08 PSA Vista
117612 Singapore - Singapur
T +65 6777 7887 - F +65 6777 3057
sg-customerservice@hilti.com

SECTION 2: General information

Storage: Storage temperature : 5 - 25 °C

A SDS for each of these components is included. Please do not separate any component SDS from this cover page

This Kit should be handled in accordance with good laboratory practices and appropriate personal protective equipment should be used

SECTION 3: Kit contents

Classification of the Product

GHS SG classification

Health hazards:
Acute toxicity (oral), Category 4
Skin corrosion/irritation, Category 1B
Serious eye damage/eye irritation, Category 1
Skin sensitisation, Category 1
Germ cell mutagenicity, Category 2
Reproductive toxicity, Category 1B

Environmental hazards: Hazardous to the aquatic environment — Chronic Hazard, Category 2

Label elements

GHS SG labelling

Hazard pictograms (GHS SG)

GHS05 GHS07 GHS08 GHS09

Signal word (GHS SG): Danger

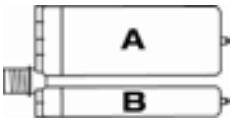
Hazardous ingredients: Epoxy resin, Amines

Hazard statements (GHS SG):
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.

	H341 - Suspected of causing genetic defects. H360F - May damage fertility. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (GHS SG)	P280 - Wear eye protection, protective clothing, protective gloves. P262 - Do not get in eyes, on skin, or on clothing. 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. P302+P352 - IF ON SKIN: Wash with plenty of water.

Additional information

2-component-foilpack, contains:
Component A: Epoxy resin, Reactive diluent, inorganic filler
Component B: Amine hardener, inorganic filler



Name	General description	Quantity	Unit	GHS SG classification
HIT-RE 100, A		1	pcs	Skin Corr. 1C, H314 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
HIT-RE 100, B		1	pcs	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 3, H402 Aquatic Chronic 3, H412

SECTION 4: General advice

General advice	For professional users only

SECTION 5: Safe handling advice

General measures	Spilled material may present a slipping hazard
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.
Storage conditions	Protect from sunlight. Store in a well-ventilated place.
Technical measures	Comply with applicable regulations
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
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation Mechanically recover the product On land, sweep or shovel into suitable containers Store away from other materials.
For containment	Collect spillage.
Incompatible materials	Sources of ignition Direct sunlight

Incompatible products	Strong bases Strong acids

SECTION 6: First aid measures

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.
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 general	Never give anything by mouth to an unconscious person If you feel unwell, seek medical advice (show the label where possible)
Symptoms/effects	Causes severe skin burns and eye damage.
Symptoms/effects after eye contact	Causes serious eye damage.
Symptoms/effects after inhalation	May cause an allergic skin reaction.

SECTION 7: Fire fighting 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
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide Carbon monoxide

SECTION 8: Other information

No data available

HIT-RE 100, B

Safety Data Sheet

According to SS 586 Part 3: 2014

Version: 2.0 Revision date: 11.05.2020 Issue date: 11.05.2020 Supersedes: 11.07.2018

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

1.1. Product identifier

Product form	Mixture
Product name	HIT-RE 100, B
Product code	BU Anchor

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use	Composite mortar component for fasteners in the construction industry
Restrictions on use	For professional use only

1.4. Supplier's details

Supplier
Hilti Far East Private Ltd.
No 20 Harbour Drive,
#06-06/08 PSA Vista
117612 Singapore - Singapur
T +65 6777 7887 - F +65 6777 3057
sg-customerservice@hilti.com

Department issuing data specification sheet
Hilti Entwicklungsgesellschaft mbH
Hiltistraße 6
86916 Kaufering - Deutschland
T +49 8191 906876
anchor.hse@hilti.com

1.5. Emergency telephone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +65 6777 7887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Health hazards	Acute toxicity (oral), Category 4 Skin corrosion/irritation, Category 1B Skin sensitisation, Category 1
Environmental hazards	Hazardous to the aquatic environment — Chronic Hazard, Category 2

2.2. Label elements

Hazard pictograms (GHS SG)

Signal word (GHS SG)	Danger
Hazard statements (GHS SG)	Causes severe skin burns and eye damage. (H314) May cause an allergic skin reaction. (H317) Toxic to aquatic life with long lasting effects. (H411)

Precautionary statements

Prevention	Wear eye protection, protective clothing, protective gloves. (P280) Do not get in eyes, on skin, or on clothing. (P262)
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) If skin irritation or rash occurs: Get medical advice/attention. (P333+P313) If eye irritation persists: Get medical advice/attention. (P337+P313) IF ON SKIN: Wash with plenty of soap and water. (P302+P352)

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Concentration (%)	Formula	Product identifier	GHS SG classification
m-Xylylenediamine	25 - 40	C8H12N2	(CAS-No.) 1477-55-0 (EC-No.) 216-032-5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317
Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenediol and ethenylbenzene	10 - 25		(CAS-No.) 710292-85-6 (EC-No.) 615-240-7	Skin Sens. 1, H317 Aquatic Chronic 2, H411
resorcinol	0,1 - 1	C6H6O2	(CAS-No.) 108-46-3 (EC-No.) 203-585-2 (EC Index-No.) 604-010-00-1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 1, H370 STOT SE 2, H371 Aquatic Acute 1, H400

SECTION 4: First aid measures

4.1. Description of 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).

Inhalation: Remove person to fresh air and keep comfortable for breathing.

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.

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.

Ingestion: Do not induce vomiting. Rinse mouth. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects: Causes severe skin burns and eye damage.

Symptoms/effects after inhalation: May cause an allergic skin reaction.

Symptoms/effects after eye contact: Causes serious eye damage.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

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

5.3. Special Protective actions for the fire fighters

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

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Spilled material may present a slipping hazard.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

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

6.2. 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.

6.3. Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation. Mechanically recover the product. On land, sweep or shovel into suitable containers. Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe 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.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	Comply with applicable regulations.
Storage conditions	Protect from sunlight. Store in a well-ventilated place.
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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

HIT-RE 100, B	
Singapore - Occupational Exposure Limits	
OEL PEL (mg/m³)	3.5 mg/m³
Regulatory reference	WSH Regulations 2014

Additional information: The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

8.2. Monitoring

No additional information available

8.3. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.4. Personal protective equipment

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)	6 (> 480 minutes)	> 0,4		EN ISO 374

Eye protection: Wear security glasses which protect from splashes

Type	Use	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

Skin and body protection: Wear suitable protective clothing

Personal protective equipment symbol(s)

Environmental exposure controls: Avoid release to the environment.

Consumer exposure controls: Avoid contact during pregnancy/while nursing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Thixotropic paste.
Colour	No data available
Odour	No data available
Odour threshold	No data available
pH	11.5
Relative evaporation rate (butylacetate=1)	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available

Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Non flammable.
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	1.41 g/cm³ DIN EN ISO 1183-3
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	No data available
Partition coefficient n-octanol/water (Log Kow)	No data available
Viscosity, dynamic	43 – 57 Pa·s HN-0333
Explosive properties	No data available
Oxidising properties	No data available
Explosive limits	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. 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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	Harmful if swallowed.
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenediol and ethenylbenzene (710292-85-6)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg

resorcinol (108-46-3)	
LD50 oral	301 mg/kg

m-Xylylenediamine (1477-55-0)	
LD50 oral rat	1090 mg/kg
LD50 oral	660 mg/kg
LD50 dermal rat	> 3100 mg/kg
LD50 dermal	> 3100 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	1.34 mg/l/4h

Skin corrosion/irritation	Causes severe skin burns. pH: 11.5
Serious eye damage/irritation	Assumed to cause serious eye damage
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

HIT-RE 100, B	
Density	1.41 g/cm³ DIN EN ISO 1183-3

Potential adverse human health effects and symptoms	No additional information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Toxic to aquatic life with long lasting effects.
Other information	Avoid release to the environment.

Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenediol and ethenylbenzene (710292-85-6)	
LC50 fish 1	≥ 50 mg/l
LC50 other aquatic organisms 1	≥ 31.8 mg/l
EC50 Daphnia 1	2.4 mg/l
NOEC chronic algae	6.25 mg/l
Bioconcentration factor (BCF REACH)	≥ 12.9
Partition coefficient n-octanol/water (Log Pow)	5.14

resorcinol (108-46-3)	
EC50 Daphnia 1	1.28 mg/l

m-Xylylenediamine (1477-55-0)	
LC50 fish 1	75 mg/l
LC50 other aquatic organisms 1	20.3 ppb
EC50 Daphnia 1	15 mg/l
LOEC (chronic)	15 mg/l
NOEC (acute)	10.5 mg/kg
NOEC (chronic)	4.7 mg/l
NOEC chronic crustacea	4.7 mg/l

12.2. Persistence and degradability

HIT-RE 100, B	
Persistence and degradability	May cause long-term adverse effects in the environment.

m-Xylylenediamine (1477-55-0)
Not rapidly degradable

12.3. Bioaccumulative potential

HIT-RE 100, B	
Bioaccumulative potential	Not established.

Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenediol and ethenylbenzene (710292-85-6)	
Bioconcentration factor (BCF REACH)	≥ 12.9
Partition coefficient n-octanol/water (Log Pow)	5.14

12.4. Mobility in soil

HIT-RE 100, B	
Mobility in soil	No additional information available

Formaldehyde, telomer with 1,3-benzenedimethanamine, 1,3-benzenediol and ethenylbenzene (710292-85-6)	
Partition coefficient n-octanol/water (Log Pow)	5.14

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Ozone: Not classified

Other adverse effects: No additional information available

SECTION 13: Disposal considerations

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.

SECTION 14: Transport information

In accordance with ADR / IATA / IMDG / RID

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. (m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (m-Xylylenediamine)	Amines, solid, corrosive, n.o.s. (m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (m-Xylylenediamine)
Transport document description			
UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (m-Xylylenediamine), 8, II, (E)	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (m-Xylylenediamine), 8, II	UN 3259 Amines, solid, corrosive, n.o.s. (m-Xylylenediamine), 8, II	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (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

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

SECTION 15: Regulatory information

15.1. National regulations

No additional information available

15.2. International Regulations

No additional information available

15.3 Chemical inventory status

Australia AICS	No
Canada DSL	No
Canada NDSL	No
China IECSC	No

EU EINECS	No
EU ELINCS	No
EU NLP	No
Korea ECL	No
US TSCA	Yes

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

EC50 - Median effective concentration

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

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

OECD - Organisation for Economic Co-operation and Development

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.

SDS_SG_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.

HIT-RE 100, A

Safety Data Sheet

According to SS 586 Part 3: 2014

Version: 3.0 Revision date: 11.05.2020 Issue date: 11.05.2020 Supersedes: 11.07.2018

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

1.1. Product identifier

Product form	Mixture
Product name	HIT-RE 100, A
Product code	BU Anchor

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use	Composite mortar component for fasteners in the construction industry
Restrictions on use	For professional use only

1.4. Supplier's details

Supplier
Hilti Far East Private Ltd.
No 20 Harbour Drive,
#06-06/08 PSA Vista
117612 Singapore - Singapur
T +65 6777 7887 - F +65 6777 3057
sg-customerservice@hilti.com

Department issuing data specification sheet
Hilti Entwicklungsgesellschaft mbH
Hiltistraße 6
86916 Kaufering - Deutschland
T +49 8191 906876
anchor.hse@hilti.com

1.5. Emergency telephone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +65 6777 7887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Health hazards	Skin corrosion/irritation, Category 1C Skin sensitisation, Category 1 Germ cell mutagenicity, Category 2 Reproductive toxicity, Category 1B
Environmental hazards	Hazardous to the aquatic environment — Chronic Hazard, Category 2

2.2. Label elements

Hazard pictograms (GHS SG)

Signal word (GHS SG): Danger

Hazard statements (GHS SG):
Causes severe skin burns and eye damage. (H314)
May cause an allergic skin reaction. (H317)
Suspected of causing genetic defects. (H341)
May damage fertility. (H360F)
Toxic to aquatic life with long lasting effects. (H411)

Precautionary statements

Prevention:
Wear eye protection, protective clothing, protective gloves. (P280)
Do not get in eyes, on skin, or on clothing. (P262)

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

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Concentration (%)	Formula	Product identifier	GHS SG classification
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis oxirane	25 - 40	C21H24O4	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (EC Index-No.) 603-074-00-8	Flam. Liq. Not classified Acute Tox. Not classified (Dermal) Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Aquatic Acute Not classified Aquatic Chronic 2, H411
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	10 - 25		(CAS-No.) 9003-36-5 (EC-No.) 500-006-8	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Reaction products of hexane-1,6-diol with 2-(chloromethyl)	10 - 25	C12H22O4	(CAS-No.) 933999-84-9 (EC-No.) 618-939-5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317

SECTION 4: First aid measures

4.1. Description of 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).

Inhalation: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

Skin contact: Gently wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get immediate medical advice/attention.

Eye contact: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.

Ingestion: Rinse mouth. Get medical advice/attention. Do not induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects after inhalation: May cause an allergic skin reaction.

Symptoms/effects after skin contact: Causes skin irritation.

Symptoms/effects after eye contact: Causes serious eye irritation.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water spray. Carbon dioxide. Dry powder. Foam. Sand.

Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

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

5.3. Special Protective actions for the fire fighters

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

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Spilled material may present a slipping hazard.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

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

6.2. 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.

6.3. Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation. Mechanically recover the product. On land, sweep or shovel into suitable containers. Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe 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.
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.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	Protect from sunlight.
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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

HIT-RE 100, A	
Singapore - Occupational Exposure Limits	
OEL PEL (mg/m³)	0.1 mg/m³ Quartz, respirable dust

Additional information: The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

8.2. Monitoring

No additional information available

8.3. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.4. Personal protective equipment

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)	6 (> 480 minutes)	> 0,4		EN ISO 374

Eye protection: Wear security glasses which protect from splashes

Type	Use	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

Skin and body protection: Wear suitable protective clothing

Personal protective equipment symbol(s)

Environmental exposure controls: Avoid release to the environment.

Consumer exposure controls: Avoid contact during pregnancy/while nursing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Thixotropic paste.
Colour	No data available
Odour	No data available
Odour threshold	No data available
pH	6.2
Relative evaporation rate (butylacetate=1)	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available

Decomposition temperature	No data available
Flammability (solid, gas)	Non flammable.
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	1.46 g/ml DIN EN ISO 1183-3
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	No data available
Partition coefficient n-octanol/water (Log Kow)	No data available
Viscosity, dynamic	36 – 53 Pa·s HN-0333
Explosive properties	Product is not explosive.
Oxidising properties	No data available
Explosive limits	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. 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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
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)

Reaction products of hexane-1,6-diol with 2-(chloromethyl) (933999-84-9)	
LD50 oral rat	3010 mg/kg

Reaction products of hexane-1,6-diol with 2-(chloromethyl) (933999-84-9)	
LD50 dermal rat	> 2000 mg/kg

Skin corrosion/irritation	Causes severe skin burns. pH: 6.2
Serious eye damage/irritation	Assumed to cause serious eye damage
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Suspected of causing genetic defects.
Carcinogenicity	Not classified
Reproductive toxicity	May damage fertility.
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

HIT-RE 100, A	
Density	1.46 g/ml DIN EN ISO 1183-3

Potential adverse human health effects and symptoms	No additional information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Toxic to aquatic life with long lasting effects.
Other information	Avoid release to the environment.

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LC50 fish 1	2.3 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)
LC50 fish 2	2.3 mg/l (96 h; Oncorhynchus mykiss; Nominal concentration)
EC50 Daphnia 1	2 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h algae (1)	9.4 mg/l (EPA 660/3 - 75/009, Selenastrum capricornutum, Static system, Fresh water, Experimental value, Biomass)
BCF other aquatic organisms 1	31 (Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	3 (Estimated value, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	2.65 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Threshold limit algae 1	> 11 mg/l (72 h; Scenedesmus sp.)
Threshold limit algae 2	4.2 mg/l (72 h; Scenedesmus sp.)

Reaction products of hexane-1,6-diol with 2-(chloromethyl) (933999-84-9)	
LC50 fish 1	30 mg/l
LC50 other aquatic organisms 1	23.1 mg/l
EC50 Daphnia 1	47 mg/l
NOEC (acute)	18 mg/l

12.2. Persistence and degradability

HIT-RE 100, A	
Persistence and degradability	May cause long-term adverse effects in the environment.

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Not rapidly degradable	
Persistence and degradability	Not readily biodegradable in water.

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)
Not rapidly degradable

Reaction products of hexane-1,6-diol with 2-(chloromethyl) (933999-84-9)
Not rapidly degradable

12.3. Bioaccumulative potential

HIT-RE 100, A	
Bioaccumulative potential	Not established.

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
BCF other aquatic organisms 1	31 (Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	3 (Estimated value, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	2.65 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

HIT-RE 100, A	
Mobility in soil	No additional information available

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Surface tension	59 mN/m (20 °C, 0.09 g/l)
Partition coefficient n-octanol/water (Log Pow)	3 (Estimated value, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	2.65 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Low potential for adsorption in soil.

12.5. Results of PBT and vPvB assessment

Component	
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Ozone: Not classified

Other adverse effects: No additional information available

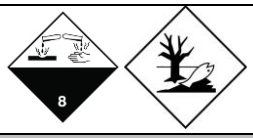
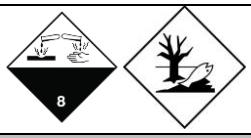
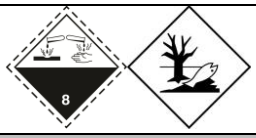
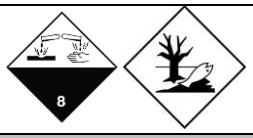
SECTION 13: Disposal considerations

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.

SECTION 14: Transport information

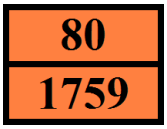
In accordance with ADR / IATA / IMDG / RID

ADR	IMDG	IATA	RID
14.1. UN number			
UN 1759	UN 1759	UN 1759	UN 1759
14.2. UN proper shipping name			
CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether)	CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether)	Corrosive solid, n.o.s. (trimethylolpropane triglycidylether)	CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether)

Transport document description			
UN 1759 CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether), 8, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 1759 CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether), 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1759 Corrosive solid, n.o.s. (trimethylolpropane triglycidylether), 8, III, ENVIRONMENTALLY HAZARDOUS	UN 1759 CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether), 8, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
III	III	III	III
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
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	C10
Special provisions (ADR)	274
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)	E

Transport by sea

Special provisions (IMDG)	223, 274
Packing instructions (IMDG)	P002, LP02
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B
Stowage category (IMDG)	A

Air transport

PCA packing instructions (IATA)	860
PCA max net quantity (IATA)	25kg
CAO packing instructions (IATA)	864
Special provisions (IATA)	A3, A803

Rail transport

Special provisions (RID)	274
Packing instructions (RID)	P002, IBC08, LP02, R001

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

Not applicable

SECTION 15: Regulatory information

15.1. National regulations

No additional information available

15.2. International Regulations

No additional information available

15.3 Chemical inventory status

Australia AICS	No
Canada DSL	No
Canada NDSL	No
China IECSC	No
EU EINECS	No
EU ELINCS	No
EU NLP	No
Korea ECL	No
US TSCA	Yes

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

EC50 - Median effective concentration

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

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

OECD - Organisation for Economic Co-operation and Development

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

Indication of changes:

Section	Changed item	Change	Comments
3	Composition/information on ingredients	Modified	

SDS_SG_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.