


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

- **Product identifier**
- **Trade name:** **Hilti HIT-RE 500**
- **Container size** 330 ml, 500 ml, 1400 ml
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** Building and construction work
- **Application of the substance / the mixture** Adhesive mortar for rebar and anchor fastenings in solid concrete
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Hilti South Africa
 72 Gazelle Avenue, Corporate Park
 PO Box 5588
 Halfway House
 ZA-1686 Midrand
 Phone: 08000 23331 (Toll free)
 Fax: 011 237 3111
 Email: Customercare.za@hilti.com
- **Informing department:**
 anchor.hse@hilti.com
 see section 16
- **Emergency telephone number:**
 Schweizerisches Toxikologisches Informationszentrum - 24 h Service
 Tel.: 0041 / 44 251 51 51 (international)
- Hilti South Africa
 Phone: 08000 23331 (Toll free)
 Fax: 011 237 3111

2 Hazards identification

- **Classification of the substance or mixture**
 Skin Corr. 1A H314 Causes severe skin burns and eye damage.
 Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
- **Label elements**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**

 GHS05 GHS07 GHS09
- **Signal word** Danger
- **Hazard-determining components of labelling:**
 m-Xylylenediamine
 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin
 (number average molecular weight = 700)
 Reaction product: bisphenol-F epichlorhydrin resin, MW ≤ 700
- **Hazard statements**
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
 P260 Do not breathe vapours.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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.

(Contd. on page 2)

-ZA-EN

Trade name: Hilti HIT-RE 500

(Contd. of page 1)

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Additional information:**



- **Information pertaining to particular dangers for man and environment: A**
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H411 Toxic to aquatic life with long lasting effects.
- **Information pertaining to particular dangers for man and environment: B**
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H412 Harmful to aquatic life with long lasting effects.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:**
 2-component-foilpack, contains:
 Component A: Epoxy resin, Reactive diluent, inorganic filler
 Component B: Amine hardener, inorganic filler

Mixture of the substances listed below with harmless additions.

- **Dangerous components:**

· Dangerous components A:		
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700) ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	25-50%
28064-14-4	Reaction product: bisphenol-F epichlorhydrin resin, MW ≤ 700 ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; H401	10-25%
16096-31-4	1,6-bis(2,3-epoxypropoxy)hexane ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; H402; Aquatic Chronic 3, H412	10-25%
30499-70-8	Trimethylolpropane, (chloromethyl)oxirane polymer ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; H402; Aquatic Chronic 3, H412	2,5-10%

- **Dangerous components B:**

1477-55-0	m-Xylylenediamine ⚠ Skin Corr. 1A, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317; H402; Aquatic Chronic 3, H412	30-40%
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- **SVHC** None
- **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation**
 Take affected persons into the open air and position comfortably
 Seek medical treatment in case of complaints.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly. If skin irritation persist, call a physician.
- **After eye contact**
 Seek immediate medical advice.

(Contd. on page 3)

Trade name: Hilti HIT-RE 500

(Contd. of page 2)

- Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Protect unharmed eye.
- Seek medical treatment.
- **After swallowing**
 - Do not induce vomiting; immediately call for medical help.
 - Rinse out mouth and then drink plenty of water.
- **Most important symptoms and effects, both acute and delayed** Allergic reactions
- **Indication of any immediate medical attention and special treatment needed**
 - No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents** Water spray, carbon dioxide (CO₂), carbon dioxide blanket, foam, or dry powder.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **Special hazards arising from the substance or mixture**
 - Can be released in case of fire
 - Nitrogen oxides (NO_x)
 - Carbon monoxide (CO)
 - Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Advice for firefighters**
- **Protective equipment:** In the event of fire, wear self contained breathing apparatus

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Wear protective equipment. Keep unprotected persons away.
 - Wear protective clothing.
 - Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.
- **Environmental precautions:**
 - Do not allow product to reach sewage system or water bodies.
 - Do not allow to enter the ground/soil.
- **Methods and material for containment and cleaning up:**
 - Collect mechanically.
 - Clean the accident area carefully; suitable cleaners are:
 - organic solvent
 - Dispose of contaminated material as waste according to item 13.
- **Reference to other sections**
 - See Section 7 for information on safe handling
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for information on disposal.

7 Handling and storage

- **Precautions for safe handling**
 - The usual precautionary measures should be adhered to general rules for handling chemicals.
 - Take note of emission threshold.
 - Use only in well ventilated areas.
 - Check the expiry date: see imprint on manifold (month/year). Do not use expired mortar!
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** Keep in a cool, dry and dark place; 5 °C to 25 °C.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Protect from heat and direct sunlight.
- **Storage class** As per VCI (1991) storage classification concept.
- **Specific end use(s)** Adhesive mortar for rebar and anchor fastenings in solid concrete

ZA-EN

(Contd. on page 4)

Trade name: Hilti HIT-RE 500

(Contd. of page 3)

8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures should be adhered to general rules for handling chemicals.
Take off immediately all contaminated clothing
Wash hands during breaks and at the end of the work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Do not eat, drink or smoke while working.
Use skin protection cream for preventive skin protection.
Clean skin thoroughly immediately after handling the product.
Ensure that washing facilities are available in the work place.
Do not carry cleaning cloths impregnated with the product in trouser pockets.
Keep away from foodstuffs, beverages and food.
- **Breathing equipment:**
Not necessary if room is well-ventilated.
In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
- **Recommended filter device for short term use:** Filter AX
- **Protection of hands:**



Protective gloves

Only use chemical-protective gloves with CE-labelling of category III.
EN 374

Avoid direct contact with the chemical/ the product/ the preparation by organizational measures.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**
Nitrile rubber, NBR
Recommended thickness of the material: $\geq 0,4$ mm
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **As protection from splashes gloves made of the following materials are suitable:** Nitrile rubber, NBR
- **Not suitable are gloves made of the following materials:**
Natural rubber, NR
Leather gloves
Strong gloves
- **Eye protection:**



Tightly sealed safety glasses.

Gauze goggles
Face protection
EN 166 / EN 170

(Contd. on page 5)

- ZA-EN -

Trade name: Hilti HIT-RE 500

(Contd. of page 4)

· **Body protection:**



Protective work clothing.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: pasty
Colour: Component A: grey
Component B: red
Mixture: red

· **Odour:** Amine-like

· **Odour threshold:** Not determined

· **pH-value:** Component A: 7
Component B: 11,5
Mixture: 11,5

· **Change in condition**

Melting point/Melting range: Not determined

Boiling point/Boiling range: > 200 °C

· **Flash point:** > 100 °C (DIN EN ISO 1523)

· **Inflammability (solid, gaseous)** Not determined

· **Ignition temperature:** Not determined

· **Decomposition temperature:** Not determined

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

· **Critical values for explosion:**

Lower: Not determined

Upper: Not determined

· **Vapour pressure at 20 °C:** 0,04 hPa

· **Density** Component A: 1,5 g/cm³ (DIN 51757)

Component B: 1,4 g/cm³ (DIN 51757)

· **Relative density** Not determined

· **Vapour density** Not determined

· **Evaporation rate** Not determined

· **Solubility in / Miscibility with**

Water: Insoluble

· **Partition coefficient (n-octanol/water):** Not determined

· **Viscosity:**

dynamic at 20 °C: 50 Pas (DIN 53019)

kinematic at 20 °C: >20 s (ISO 2431)

· **Solvent content:**

Organic solvents: 0 %

Water: 0 %

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity**

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

(Contd. on page 6)



Trade name: Hilti HIT-RE 500

(Contd. of page 5)

- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

1477-55-0 m-Xylylenediamine

Oral	LD50	1040 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalative	LC50/4h	2,4 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible by skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** None

12 Ecological information

- **Toxicity**

· **Aquatic toxicity:**

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

EC50/48h	9,4 mg/l (Algae)
	1,7 mg/l (magna daphnia)
EC50/96h	1,2 mg/l (fish)

28064-14-4 Reaction product: bisphenol-F epichlorhydrin resin, MW ≤ 700

EC50/48h	9,4 mg/l (Algae)
	1,7 mg/l (magna daphnia)
EC50/96h	1,5 mg/l (fish)

16096-31-4 1,6-bis(2,3-epoxypropoxy)hexane

EC50/48h	23,1 mg/l (Algae)
	39 mg/l (magna daphnia)
EC50/96h	17,1 mg/l (fish)

1477-55-0 m-Xylylenediamine

EC50/48h	12 mg/l (Algae)
	15,2 mg/l (magna daphnia)
EC50/96h	75 mg/l (fish)

- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxic effects:**
- **Remark:** Toxic for fish

(Contd. on page 7)

Trade name: Hilti HIT-RE 500

(Contd. of page 6)

- **Additional ecological information:**
- According to recipe contains the following heavy metals and compounds according to EC guideline NO. 76/464 EC:
None
- **General notes:**
Avoid transfer into the environment.
The product contains materials that are harmful to the environment.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.
Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations.

· European waste catalogue

08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances
20 01 27*	paint, inks, adhesives and resins containing dangerous substances

- **Uncleaned packagings:**
- **Recommendation:**
Disposal must be made according to official regulations.
Empty packs: May be disposed via the local Green Dot collecting system or EAK waste material code 150102 (plastic packaging materials)

14 Transport information

- | | |
|--|---|
| · UN-Number | UN3259 |
| · ADR, IMDG, IATA | |
| · UN proper shipping name | AMINES, SOLID, CORROSIVE, N.O.S (m-Xylylenediamine) |
| · ADR, IMDG, IATA | |
| · Transport hazard class(es) | |
| · ADR, IMDG, IATA | |
| · Class | 8 Corrosive substances. |
| · Label | 8 |
| · Packing group | |
| · ADR, IMDG, IATA | II |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Warning: Corrosive substances. |
| · EMS Number: | F-A,S-B |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADR | |
| · Limited quantities (LQ) | 1 kg |
| · Tunnel restriction code | E |
| · IMDG | |
| · Limited quantities (LQ) | 1 kg |

(Contd. on page 8)

Trade name: Hilti HIT-RE 500

(Contd. of page 7)

· IATA	
· Remarks:	Packing Instruction No.: 859
· UN "Model Regulation":	UN3259 AMINES, SOLID, CORROSIVE, N.O.S (m-Xylylenediamine), 8, II
· HS-Code:	3214 10 10: Glaziers' putty, grafting putty, resin cements, caulking compounds and other mastics

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
The product is subject to classification in accordance with the prevailing version of the regulations on hazardous materials.
- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57** None
- **Chemical safety assessment:** not required.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H401 Toxic to aquatic life.
H402 Harmful to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
- **Department issuing data specification sheet:**
Hilti Entwicklungsgesellschaft mbH
Hiltistrasse 6
D-86916 Kaufering
Tel.: +49 8191 906310
Fax: +49 8191 90176310
e-mail: anchor.hse@hilti.com
- **Contact:** Mechthild Krauter
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
- *** Data compared to the previous version altered.**