Safety Data Sheet
acc. to ISO 11014

Printing date 05/18/2015 Version number 8 Reviewed on 05/18/2015

1 Identification

· **Product identifier**

· **Trade name: Hilti HIT-RE 500**
· **Container size:** 330 ml, 500 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, Inc.
5400 South 122nd East Ave.
US-Tulsa, OK 74146
Phone: (800) 879-8000
Fax: (800) 879-7000
Español: (800) 879-5000

· **Information department:**
anchor.hse@hilti.com
see section 16
· **Emergency telephone number:**
Chem-Trec
Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada)
Tel.: 703 527 3887 (Other countries)
Hilti, Inc.
Phone: (800) 879-8000
Fax: (800) 879-7000
Español: (800) 879-5000

*
2 Hazard(s) identification

· **Classification of the substance or mixture**

Skin Corr. 1A	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious 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 labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**



GHS05 GHS07 GHS09

· **Signal word** Danger

· **Hazard-determining components of labeling:**
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)

Safety Data Sheet
acc. to ISO 11014

Printing date 05/18/2015 Version number 8 Reviewed on 05/18/2015

Trade name: Hilti HIT-RE 500

(Contd. of page 1)

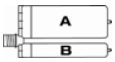
· **Classification system**
· **NFPA ratings (scale 0-4)**



Health = 3
Fire = 1
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

· **Additional information:**



Hilti HIT

· **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 nonhazardous additions.

· **Dangerous components:** .

· **Dangerous components A:**		
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)	25-50%
28064-14-4	Reaction product: bisphenol-F epichlorhydrin resin, MW ≤ 700	10-25%
16096-31-4	1,6-bis(2,3-epoxypropoxy)hexane	10-25%
30499-70-8	Trimethylolpropane, (chloromethyl)oxirane polymer	2.5-10%
14808-60-7	Quartz (SiO2)	25-50%

.

· **Dangerous components B:**		
1477-55-0	m-Xylylenediamine	30-40%
14808-60-7	Quartz (SiO2)	15-30%
1344-28-1	aluminium oxide	5-10%

.

· **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** Immediately remove any clothing soiled by the product.
· **After inhalation**
Take affected persons into fresh air and keep quiet.
Seek medical treatment in case of complaints.
· **After skin contact** Immediately wash with water and soap and rinse thoroughly.

(Contd. on page 3)

Safety Data Sheet
acc. to ISO 11014

Printing date 05/18/2015 Version number 8 Reviewed on 05/18/2015

Trade name: Hilti HIT-RE 500

(Contd. of page 2)

· **After eye contact**
Seek immediate medical advice.
Rinse opened eye for several minutes under running water. Then consult a doctor.
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.
· **Information for doctor**
· **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 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents** Water with full jet.
· **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NOx)
Carbon monoxide (CO)
In certain fire conditions, traces of other toxic gases cannot be excluded.
· **Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Wear protective clothing.
Ensure adequate ventilation
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
· **Methods and material for containment and cleaning up:**
Pick up mechanically.
Clean the affected area carefully; suitable cleaners are:
organic solvent
Dispose 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 disposal information.

*

7 Handling and storage

· **Handling**
· **Precautions for safe handling**
The usual precautionary measures for handling chemicals should be followed.
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 receptacles:**
Keep in a cool, dry and dark place; 41 °F / 5 °C to 77 °F / 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.

(Contd. on page 4)

Safety Data Sheet
acc. to ISO 11014

Printing date 05/18/2015 | Version number 8 | Reviewed on 05/18/2015

Trade name: Hilti HIT-RE 500

(Contd. of page 3)

· **Specific end use(s)** Adhesive mortar for rebar and anchor fastenings in solid concrete

*

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 ar not relevant for this product.

1477-55-0 m-Xylylenediamine	
REL	Short-term value: C 0.1 mg/m³ Skin
TLV	Short-term value: C 0.1 mg/m³ Skin

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment**
· **General protective and hygienic measures**
The usual precautionary measures for handling chemicals should be followed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Do not eat, drink, smoke or sniff while working.
Clean skin thoroughly immediately after handling the product.
Ensure that washing facilities are available at the work place.
Keep away from foodstuffs, beverages and feed.
Use skin protection cream for skin protection.
Do not carry product impregnated cleaning cloths in trouser pockets.
· **Breathing equipment:**
Not necessary if room is well-ventilated.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device 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-labeling 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: ≥ 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 trough 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 goggles.

Gauze goggles
Face protection

(Contd. on page 5)

Safety Data Sheet
acc. to ISO 11014

Printing date 05/18/2015 Version number 8 Reviewed on 05/18/2015

Trade name: Hilti HIT-RE 500

(Contd. of page 4)

EN 166 / EN 170
· **Body protection:**



Protective work clothing.

*

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Pasty
Color:	Component A: grey Component B: red Mixture: red
· **Odor:**	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 (> 392 °F)
· **Flash point:**	> 100 °C (> 212 °F) (DIN EN ISO 1523)
· **Flammability (solid, gaseous)**	Not determined
· **Ignition temperature:**	Not determined
· **Decomposition temperature:**	Not determined
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined
Upper:	Not determined
· **Vapor pressure at 20 °C (68 °F):**	0.04 hPa
· **Density:**	Component A: 1.5 g/cm³ (DIN 51757) Component B: 1.4 g/cm³ (DIN 51757) Not determined
· **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 (68 °F):	50 Pas (DIN 53019)
kinematic at 20 °C (68 °F):	>20 s (ISO 2431)
· **Solvent content:**	
Organic solvents:	0 %
Water:	0 %
· **Other information**	No further relevant information available.

(Contd. on page 6)

Safety Data Sheet
acc. to ISO 11014

Printing date 05/18/2015 Version number 8 Reviewed on 05/18/2015

Trade name: Hilti HIT-RE 500

(Contd. of page 5)

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **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 through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU 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.

· **Carcinogenic categories**

· **NTP (National Toxicology Program)**		
14808-60-7	Quartz (SiO2)	K

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)

(Contd. on page 7)

Safety Data Sheet
acc. to ISO 11014

Printing date 05/18/2015 | Version number 8 | Reviewed on 05/18/2015

Trade name: Hilti HIT-RE 500

(Contd. of page 6)

	15.2 mg/l (magna daphnia)
EC50/96h	75 mg/l (fish)

· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Toxic for fish
· **Additional ecological information:**
· **According to the formulation contains the following heavy metals and compounds from the EU guideline NO. 2006/11/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 hazardous waste disposers.
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.
Dispose of packaging according to regulations on the disposal of packagings.

*
14 Transport information

· **UN-Number**	
· **ADR, IMDG, IATA**	3259 / PG II 3077 / PG III
· **UN proper shipping name**	
· **ADR**	AMINES, SOLID, CORROSIVE, N.O.S. (m-Xylylenediamine) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Bisphenol A/F Epoxy Resin)
· **IMDG, IATA**	AMINES, SOLID, CORROSIVE, N.O.S (m-Xylylenediamine) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Bisphenol A/F Epoxy Resin)
· **Transport hazard class(es)**	
· **ADR**	
· **Class**	8 Corrosive substances 9 Miscellaneous dangerous substances and articles.
· **IMDG, IATA**	
· **Class**	8 9

(Contd. on page 8)

Safety Data Sheet
acc. to ISO 11014

Printing date 05/18/2015 | Version number 8 | Reviewed on 05/18/2015

Trade name: Hilti HIT-RE 500

(Contd. of page 7)

· **Label**	8 9
· **Packing group** · **ADR, IMDG, IATA**	 3259 / PG II 3077 / PG III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user** · **EMS Number:**	Not applicable. F-A, S-B
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **IMDG** · **Remarks:**	 Limited Quantity (LQ) 1 kg 5 kg
· **IATA** · **Remarks:**	 Packing Instruction No. UN 3259: 859 UN 3077: 956 All packed in one
· **UN "Model Regulation":**	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**

· **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

1344-28-1	aluminium oxide

· **TSCA (Toxic Substances Control Act):**

14808-60-7	Quartz (SiO2)
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
28064-14-4	Reaction product: bisphenol-F epichlorhydrin resin, MW ≤ 700
1477-55-0	m-Xylylenediamine
16096-31-4	1,6-bis(2,3-epoxypropoxy)hexane
30499-70-8	Trimethylolpropane, (chloromethyl)oxirane polymer
67762-90-7	FUMED SILICA (SILOXANES AND SILICONES, DI-ME, REACTION PRODUCTS WITH SILICA)
65997-16-2	Cement, alumina, chemicals
1344-28-1	aluminium oxide

· **Proposition 65:**

· **Chemicals known to cause cancer:**

14808-60-7	Quartz (SiO2)

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

14808-60-7	Quartz (SiO2)	A2
1344-28-1	aluminium oxide	A4
108-46-3	resorcinol	A4

(Contd. on page 9)

Trade name: Hilti HIT-RE 500

(Contd. of page 8)

· **MAK (German Maximum Workplace Concentration)**		
14808-60-7	Quartz (SiO2)	1
1344-28-1	aluminium oxide	2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**	
14808-60-7	Quartz (SiO2)

· **National regulations**
The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
· **Chemical safety assessment:** not required.

*
16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases** H318 Causes serious eye damage.

· **Department issuing SDS:**
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
· **Date of preparation / last revision** 05/18/2015 / 7
· **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
ACGIH: American Conference of Governmental Industrial Hygienists
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)
NFPA: National Fire Protection Association (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
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.**