

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;

**Safety Data Sheet**

Date of issue: 04/04/2017

Version: 4.3

Revision date: 04/04/2017

Supersedes: 14/03/2016

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

**1.1. Product identifier**

Product form	Mixture
Trade name	CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;
Product code	BU Fire Protection

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

No additional information available

**1.3. Details of the supplier of the safety data sheet**

Hilti (Malaysia) Sdn. Bhd.  
 F-5-A, Sime Darby Brunfield Tower, No. 2, Jalan PJU 1A/7A  
 47301 Petaling Jaya, Selangor - Malaysia  
 T +60 3 5628 7222  
 ; 1800 880 985 toll free - F +60 3 7848 7399

**Supplier**

Hilti (Malaysia) Sdn. Bhd.  
 F-5-A, Sime Darby Brunfield Tower, No. 2, Jalan PJU 1A/7A  
 47301 Petaling Jaya, Selangor - Malaysia  
 T +60 3 5628 7222  
 ; 1800 880 985 toll free - F +60 3 7848 7399

**Department issuing data specification sheet**

Hilti AG  
 Feldkircherstraße 100  
 9494 Schaan - Liechtenstein  
 T +423 234 2111  
[chemicals.hse@hilti.com](mailto:chemicals.hse@hilti.com)

**1.4. Emergency telephone number**

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +60 3 5628 7222 ; 1800 880 985 toll free
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**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

Classification according to the United Nations GHS (Rev. 4, 2011)

Aerosol 1	H222;H229
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Resp. Sens. 1	H334
Skin Sens. 1	H317
Carc. 2	H351
Lact.	H362
STOT SE 3	H335
STOT RE 2	H373
Aquatic Chronic 4	H413

Full text of hazard classes and H-statements : see section 16

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;  
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**2.2. Label elements**

**Labelling according to the United Nations GHS (Rev. 4, 2011)**

Hazard pictograms (GHS-UN)



Signal word (GHS-UN)

Danger

Hazardous ingredients

4,4'-diphenylmethanediisocyanate, isomeres and homologues; Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins)

Hazard statements (GHS-UN)

H222 - Extremely flammable aerosol  
 H229 - Pressurised container: May burst if heated  
 H315 - Causes skin irritation  
 H317 - May cause an allergic skin reaction  
 H319 - Causes serious eye irritation  
 H332 - Harmful if inhaled  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 H335 - May cause respiratory irritation  
 H351 - Suspected of causing cancer  
 H362 - May cause harm to breast-fed children  
 H373 - May cause damage to organs through prolonged or repeated exposure  
 H413 - May cause long lasting harmful effects to aquatic life

Precautionary statements (GHS-UN)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
 P211 - Do not spray on an open flame or other ignition source  
 P251 - Do not pierce or burn, even after use  
 P260 - Do not breathe spray  
 P280 - Wear eye protection, protective clothing, protective gloves  
 P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

**2.3. Other hazards**

No additional information available

**SECTION 3: Composition/information on ingredients**

**3.1. Substance**

Not applicable

**3.2. Mixture**

Name	Product identifier	%	Classification according to the United Nations GHS
4,4'-diphenylmethanediisocyanate, isomeres and homologues	(CAS No) 9016-87-9	40 - 60	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
tris(2-chloro-1-methylethyl) phosphate	(CAS No) 13674-84-5	10 - 25	Flam. Liq. Not classified Acute Tox. 4 (Oral), H302
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins)	(CAS No) 85535-85-9	10 - 25	Flam. Liq. Not classified Acute Tox. Not classified (Dermal) Lact., H362 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Dimethyl ether	(CAS No) 115-10-6	5 - 10	Flam. Gas 1, H220

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;  
 Safety Data Sheet

			Compressed gas, H280 Acute Tox. Not classified (Inhalation:gas) Aquatic Acute Not classified
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Full text of H-statements: see section 16

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	Eye irritation.

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

Treat symptomatically.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

Suitable extinguishing media	Water spray. Dry powder. Foam. Carbon dioxide.
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**5.2. Special hazards arising from the substance or mixture**

Fire hazard	Extremely flammable aerosol.
Explosion hazard	Pressurised container: May burst if heated.

**5.3. Advice for firefighters**

Protection during firefighting	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

<b>6.1.1. For non-emergency personnel</b>	
Emergency procedures	Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe spray. Avoid contact with skin and eyes.
<b>6.1.2. For emergency responders</b>	
Protective equipment	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;  
 Safety Data Sheet

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Methods for cleaning up Mechanically recover the product.  
 Other information Dispose of materials or solid residues at an authorized site.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Precautions for safe handling Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact during pregnancy/while nursing. Do not breathe spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. May form flammable/explosive vapour-air mixture.

Hygiene measures Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

**7.2. Conditions for safe storage, including any incompatibilities**

Storage conditions Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep cool.

Storage temperature 5 - 25 °C

Heat and ignition sources Keep away from heat and direct sunlight. Keep away from ignition sources.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	≈ mg/kg bodyweight/day

**8.2. Appropriate engineering controls**

Appropriate engineering controls Ensure good ventilation of the work station.

Environmental exposure controls Avoid release to the environment.

**8.3. Individual protection measures, such as personal protective equipment (PPE)**

Hand protection Protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	3 (> 60 minutes)			EN 374

Eye protection

Type	Use	Characteristics	Standard
Safety glasses			EN 166, EN 171

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;  
**Safety Data Sheet**

Skin and body protection

Wear suitable protective clothing

Respiratory protection

In case of inadequate ventilation wear respiratory protection

Device	Filter type	Condition	Standard
Aerosol mask	Filter AX (brown)		



**8.4. Exposure limit values for the other components**

No additional information available

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	Aerosol.
Colour	No data available
Odour	No data available
Odour threshold	No data available
pH	No data available
Relative evaporation rate (butylacetate=1)	No data available
Melting point	Not applicable
Freezing point	No data available
Boiling point	< 35 °C
Flash point	< 0 °C
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Extremely flammable aerosol
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	< 1.3 g/cm <sup>3</sup>
Solubility	No data available
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	Pressurised container: May burst if heated.
Oxidising properties	No data available
Explosive limits	No data available

**9.2. Other information**

No additional information available

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;  
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**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Extremely flammable aerosol. Pressurised container: May burst if heated.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Heating may cause a fire or explosion.

**10.4. Conditions to avoid**

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

No additional information available.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity (oral) Not classified

ATE CLP (gases)	4500.000 ppmv/4h
ATE CLP (vapours)	11.000 mg/l/4h
ATE CLP (dust,mist)	1.500 mg/l/4h

<b>4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)</b>	
LD50 oral rat	> 10000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit; Literature study)

<b>Dimethyl ether (115-10-6)</b>	
LC50 inhalation rat (mg/l)	309 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	164000 ppm/4h (Rat; Literature study)

<b>tris(2-chloro-1-methylethyl) phosphate (13674-84-5)</b>	
LD50 oral rat	1150 - 1750 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value; 1011-1824 mg/kg bodyweight; Rat; Experimental value)
LD50 oral	1150 - 1750
LD50 dermal rat	> 2000 mg/kg (Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)

<b>Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)</b>	
LD50 oral rat	> 10 (Rat; Other; Experimental value; >4000; Rat; Other; Experimental value)
LD50 dermal rat	> 2800 mg/kg bodyweight (Rat; Read-across)
LD50 dermal rabbit	> 13500 mg/kg bodyweight (Rabbit; Read-across)

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Suspected of causing cancer.
Reproductive toxicity	May cause harm to breast-fed children.
Specific target organ toxicity (single exposure)	May cause respiratory irritation.

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;  
 XTW;  
 Safety Data Sheet

Specific target organ toxicity (repeated exposure) May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Not classified

<b>CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;</b>	
Vaporizer	Aerosol

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecology - general May cause long lasting harmful effects to aquatic life.

<b>4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)</b>	
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h)
<b>Dimethyl ether (115-10-6)</b>	
LC50 fish 1	3082 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 1	756.2 mg/l (48 h; Daphnia magna)
LC50 fish 2	> 1000 mg/l (96 h; Pisces)
EC50 Daphnia 2	> 4400 mg/l (48 h; Daphnia magna)
Threshold limit algae 1	154.9 mg/l (96 h; Algae)
<b>tris(2-chloro-1-methylethyl) phosphate (13674-84-5)</b>	
LC50 fish 1	98 mg/l (96 h; Pimephales promelas; GLP)
EC50 Daphnia 1	65 - 335 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	56.2 mg/l (96 h; Brachydanio rerio)
Threshold limit algae 1	73 mg/l (96 h; Selenastrum capricornutum; Growth rate)
<b>Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)</b>	
LC50 fish 1	> 10000 mg/l (96 h; Alburnus alburnus)
LC50 fish 2	> 500 mg/l (48 h; Leuciscus idus)

**12.2. Persistence and degradability**

<b>4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)</b>	
Persistence and degradability	Not readily biodegradable in water. Hydrolysis in water. No (test)data on mobility of the substance available.
<b>Dimethyl ether (115-10-6)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Not applicable (gas).
<b>tris(2-chloro-1-methylethyl) phosphate (13674-84-5)</b>	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.
<b>Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)</b>	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Not readily biodegradable in the soil. Adsorbs into the soil.

**12.3. Bioaccumulative potential**

<b>4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)</b>	
BCF fish 1	1 (Pisces)
Bioaccumulative potential	Not bioaccumulative.
<b>Dimethyl ether (115-10-6)</b>	
Log Pow	0.10 (Experimental value; 0.07; QSAR; KOWWIN; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
<b>tris(2-chloro-1-methylethyl) phosphate (13674-84-5)</b>	
BCF fish 1	0.8 - 4.6 (Cyprinus carpio; Test duration: 6 weeks)
Log Pow	2.59 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;

Safety Data Sheet

Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)	
Log Pow	> 5 (Literature)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).

#### 12.4. Mobility in soil

Dimethyl ether (115-10-6)	
Surface tension	0.020 N/m (-40 °C)

#### 12.5. Other adverse effects

No additional information available






### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Waste disposal recommendations	After curing, the product can be disposed of with household waste.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1950	1950	1950	1950	1950
14.2. UN proper shipping name				
AEROSOLS	AEROSOLS	Aerosols, flammable	AEROSOLS	AEROSOLS
Transport document description				
UN 1950 AEROSOLS, 2.1, (D)	UN 1950 AEROSOLS, 2.1			
14.3. Transport hazard class(es)				
2.1	2.1	2.1	2.1	2.1
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
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	Dangerous for the environment : No
No supplementary information available				

#### 14.6. Special precautions for user

##### - Overland transport

Classification code (ADR) 5F



CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;  
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Special provisions (ADR)	190, 327, 344, 625
Limited quantities (ADR)	1l
Packing instructions (ADR)	P207, LP02
Mixed packing provisions (ADR)	MP9
Tunnel restriction code (ADR)	D
<b>- Transport by sea</b>	
Special provisions (IMDG)	63, 190, 277, 327, 344, 959
Limited quantities (IMDG)	SP277
Packing instructions (IMDG)	P207, LP02
EmS-No. (Fire)	F-D
EmS-No. (Spillage)	S-U
Stowage category (IMDG)	None
Stowage and segregation (IMDG)	Protected from sources of heat For AEROSOLS with a maximum capacity of 1 litre: Category A. Segregation as for class 9 but 'Separated from' class 1 except division 1.4. For AEROSOLS with a capacity above 1 litre: Category B. Segregation as for the appropriate sub-division of class 2. For WASTE AEROSOLS: Category C. Clear of living quarters. Segregation as for the appropriate sub-division of class 2.
MFAG-No	126
<b>- Air transport</b>	
PCA packing instructions (IATA)	203
PCA max net quantity (IATA)	75kg
CAO packing instructions (IATA)	203
Special provisions (IATA)	A145, A167, A802
<b>- Inland waterway transport</b>	
Classification code (ADN)	5F
Special provisions (ADN)	19, 327, 344, 625
Limited quantities (ADN)	1 L
Excepted quantities (ADN)	E0
Equipment required (ADN)	PP, EX, A
Ventilation (ADN)	VE01, VE04
Number of blue cones/lights (ADN)	1
Carriage prohibited (ADN)	No
Not subject to ADN	No
<b>- Rail transport</b>	
Special provisions (RID)	190, 327, 344, 625
Limited quantities (RID)	1L
Packing instructions (RID)	P207, LP02
Carriage prohibited (RID)	No

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

**SECTION 15: Regulatory information**

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

No additional information available

CF 710; CF-F 750; CF-F 750 GV; CF-F 650 B; CF-FW 500; CF-I 50 ECO; CF-I ECO+; CF-I ECO GV; CF I 500; CF-I 750; CF-I 750/G; CF-ISO 750/P; CF-I XTW;  
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**SECTION 16: Other information**

Full text of H-statements:

H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H362	May cause harm to breast-fed children
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H413	May cause long lasting harmful effects to aquatic life

SDS\_UN\_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*