

CF 101 / CF Z 200

Safety information for 2-Component-products

Issue date: 25/04/2025

Revision date: 25/04/2025

Supersedes: 30/09/2024

Version: 7.0

SECTION 1: Kit identification

1.1 Product identifier

Product name CF 101 / CF Z 200
Product code BU Fire Protection

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

Hilti Deutschland AG
Hiltistr. 2
86916 Kaufering - Deutschland
T +49 8191 90-0 - F +49 8191 90-1122
de.kundenservice@hilti.com

SECTION 2: General information

Germany

Regulatory reference WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

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

SECTION 3: Kit contents

Classification of the Product

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation)	H332
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Resp. Sens. 1	H334
Skin Sens. 1	H317
Carc. 2	H351
STOT SE 3	H335
STOT RE 2	H373

Full text of H- and EUH-statements: see section 16

Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07



GHS08

Signal word (CLP)

Danger

CF 101 / CF Z 200

Kit Safety Information Sheet (SIS)

Hazardous ingredients	tris(2-chloro-1-methylethyl) phosphate, 2,2',6,6'-Tetrabromo-4,4'-isopropylidenediphenol, oligomeric reaction products with Propylene oxide and n-butyl glycidyl ether, 4,4'-diphenylmethanediisocyanate, isomers and homologues
Hazard statements (CLP)	H302+H332 - Harmful if swallowed or if inhaled H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 - May cause respiratory irritation. H351 - Suspected of causing cancer. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (CLP)	P260 - Do not breathe vapours. P280 - Wear Protective clothing, eye protection, protective clothing. P284 - In case of inadequate ventilation wear respiratory protection. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Extra phrases	As from 24 August 2023 adequate training is required before industrial or professional use

Additional information



Name	General description	Quantity	Unit	Classification according to Regulation (EC) No. 1272/2008 [CLP]
CF 101/ CF Z 200, B		1	pcs (pieces)	Acute Tox. 4 (Inhalation: dust, mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
CF 101/ CF Z 200, A		1	pcs (pieces)	Acute Tox. 4 (Oral), H302 Carc. 2, H351

SECTION 4: General information

No data available

SECTION 5: Safe handling advice

Environmental precautions	Avoid release to the environment Prevent entry to sewers and public waters Notify authorities if liquid enters sewers or public waters
Storage conditions	Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Keep only in the original container in a cool, well ventilated place away from :
Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment Do not breathe vapours. Use only outdoors or in a well-ventilated area. 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 Provide good ventilation in process area to prevent formation of vapour

CF 101 / CF Z 200

Kit Safety Information Sheet (SIS)

Methods for cleaning up	Avoid breathing dust/fume/gas/mist/vapours/spray.
Incompatible materials	Store away from other materials.
	Sources of ignition
	Direct sunlight
Incompatible products	Strong bases
	Strong acids

SECTION 6: First aid measures

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 Rinse mouth Do NOT induce vomiting. Obtain emergency medical attention
First-aid measures after inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor
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. Wash contaminated clothing before reuse.
Symptoms/effects after eye contact	Causes serious eye irritation.
Symptoms/effects after inhalation	May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	May cause an allergic skin reaction. Causes skin irritation.
Other medical advice or treatment	Treat symptomatically

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	Do not enter fire area without proper protective equipment, including respiratory protection
Hazardous decomposition products in case of fire	Toxic fumes may be released

SECTION 8: Other information

No data available

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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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

1.1. Product identifier

Product form	Mixture
Trade name	CF 101, B / CF Z 200, B
Product code	BU Fire Protection

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

1.2.1. Relevant identified uses

Main use category	Professional use
Industrial/Professional use spec	For professional use only
Use of the substance/mixture	PU installation foams

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier	Department issuing data specification sheet
Hilti Deutschland AG	Hilti AG
Hiltistr. 2	Feldkircherstraße 100
DE 86916 Kaufering	P.O. Box 333
Deutschland	HAG 9494 Schaan
T +49 8191 90-0 , F +49 8191 90-1122	Liechtenstein
de.kundenservice@hilti.com	T +423 234 2111, F +423 234 2965
	www.hilti.com

1.4. Emergency telephone number

Emergency number	Emergency CONTACT (24-Hour-Number): GBK GmbH Global Regulatory Compliance +49 (0)6132-84463
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Carcinogenicity, Category 2	H351
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Specific target organ toxicity – Repeated exposure, Category 2	H373
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07



GHS08

Signal word (CLP)

Warning

Contains

4,4'-diphenylmethanediisocyanate, isomeres and homologues

Hazard statements (CLP)

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

H351 - Suspected of causing cancer.

H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (CLP)

P260 - Do not breathe vapours.

P280 - Wear protective gloves, protective clothing, eye protection.

P284 - In case of inadequate ventilation wear respiratory protection.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Extra phrases

As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	<p>This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII</p> <p>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII</p>

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	<p>The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605</p>

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

3.2. Mixtures

Name	Product identifier	Conc.	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4,4'-diphenylmethanediisocyanate, isomeres and homologues substance with national workplace exposure limit(s) (DE)	CAS-No.: 9016-87-9 EC-No.: 618-498-9	100	Acute Tox. 4 (Inhalation), H332 (ATE=1,5 mg/l/4h) Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373

Specific concentration limits:

Name	Product identifier	Specific concentration limits
4,4'-diphenylmethanediisocyanate, isomeres and homologues	CAS-No.: 9016-87-9 EC-No.: 618-498-9	(0,1 ≤ C < 100) Resp. Sens. 1, H334 (5 ≤ C < 100) Skin Irrit. 2, H315 (5 ≤ C < 100) Eye Irrit. 2, H319 (5 ≤ C < 100) STOT SE 3, H335

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
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

Hazardous decomposition products in case of fire	Toxic fumes may be released.
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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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures Ventilate spillage area. Do not breathe vapours. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Mechanically recover the product. Notify authorities if product enters sewers or public waters.

Other information Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe vapours. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

Hygiene measures Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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 Keep cool. Protect from sunlight. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Storage temperature 5 – 25 °C

Storage class (LGK, TRGS 510) LGK 10 - Combustible liquids

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)

Germany - Occupational Exposure Limits (TRGS 900)

Local name	pMDI (als MDI berechnet)
AGW (OEL TWA)	0,05 mg/m ³ (E)

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4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
Peak exposure limitation factor	1;=2=(I)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); H - hautresorptiv; Sah - Atemwegs- und Hautsensibilisierender Stoff; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden; 12 - Der Arbeitsplatzgrenzwert gilt in der Regel nur für die Monomeren. Zur Beurteilung von Oligomeren oder Polymeren siehe TRGS 430 "Isocyanate"
Regulatory reference	TRGS900

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Protective clothing. Gloves. Protective goggles. Avoid all unnecessary exposure.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses			EN 166, EN 171

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear suitable gloves tested to EN374. Suitable for short-term work or as a splash guard:

Nitrile rubber gloves (> 0.1 mm). In case of permanent product contact:

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Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	>0,35		
Disposable gloves	Butyl rubber	6 (> 480 minutes)	>0,35		

8.2.2.3. Respiratory protection

Respiratory protection:

Not necessary with sufficient ventilation. Ensure good ventilation of the work station. Open windows during application to ensure natural ventilation. If the occupational exposure limit is exceeded: Wear appropriate mask. (e.g. gas filter type A1-P2 according to EN 14387)

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

As from 24 August 2023 adequate training is required before industrial or professional use, www.feica.eu/PUinfo



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	amber.
Odour	characteristic.
Odour threshold	Not available
Melting point	Not applicable
Freezing point	Not available
Boiling point	Not available
Flammability	Not applicable
Lower explosion limit	Not available
Upper explosion limit	Not available
Flash point	> 93 °C
Auto-ignition temperature	Not available
Decomposition temperature	Not available
pH	Not available
Viscosity, kinematic	Not available
Solubility	Not available
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	Not available
Vapour pressure at 50°C	Not available
Density	Not available
Relative density	1,1 – 1,25
Relative vapour density at 20°C	Not available

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Particle characteristics Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Water, humidity. Direct sunlight. Heat. Open flame.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Inhalation:dust,mist: Harmful if inhaled.

CF 101, B / CF Z 200, B	
ATE CLP (dust,mist)	1,5 mg/l/4h
4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
LD50 oral rat	> 10000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Literature study, Dermal)
LD50 dermal	9400 mg/kg
LC50 Inhalation - Rat	0,49 mg/l
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Suspected of causing cancer.
4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
IARC group	3 - Not classifiable
Reproductive toxicity	Not classified

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STOT-single exposure May cause respiratory irritation.

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)

STOT-single exposure May cause respiratory irritation.

STOT-repeated exposure May cause damage to organs through prolonged or repeated exposure.

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)

STOT-repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) Not classified

Hazardous to the aquatic environment, long-term (chronic) Not classified

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)

LC50 - Other aquatic organisms [1] > 1000 mg/l (96 h, Literature study)

12.2. Persistence and degradability

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)

Persistence and degradability Not readily biodegradable in water.

12.3. Bioaccumulative potential

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)

BCF - Fish [1] 268,1 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)

Partition coefficient n-octanol/water (Log Pow) 10,46 (Calculated, KOWWIN)

Bioaccumulative potential Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)

Surface tension No data available in the literature

Organic Carbon Normalized Adsorption Coefficient (Log Koc) 9,078 – 10,597 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

Ecology - soil Adsorbs into the soil.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

European List of Waste (LoW, EC 2000/532)

HP Code

Dispose of contents/container in accordance with licensed collector's sorting instructions.
 08 05 01* - waste isocyanates
 HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.
 HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
 HP7 - "Carcinogenic:" waste which induces cancer or increases its incidence
 HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.
 HP13 - "Sensitising:" waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID /

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
74.	CF 101, B / CF Z 200, B

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions

Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK)

WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).

Major Accidents Ordinance (12. BImSchV)

Is not subject to the Major Accidents Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
			general update

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
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Abbreviations and acronyms:	
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TRGS	Technical Rules for Hazardous Substances
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disrupting properties
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
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
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration

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Abbreviations and acronyms:	
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
STP	Sewage treatment plant

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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.
H373	May cause damage to organs through prolonged or repeated exposure.
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Acute Tox. 4 (Inhalation:dust,mist)	H332	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Carc. 2	H351	Calculation method
STOT SE 3	H335	Calculation method
STOT RE 2	H373	Calculation method

SDS_EU_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.

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Issue date: 25.04.2025

Revision date: 25.04.2025

Supersedes version of: 06.08.2024

Version: 6.0

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

1.1. Product identifier

Product form	Mixture
Trade name	CF 101, A / CF Z 200, A
Product code	BU Fire Protection

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

1.2.1. Relevant identified uses

Main use category	Professional use
Industrial/Professional use spec	For professional use only
Use of the substance/mixture	PU installation foams

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Hilti Deutschland AG
Hiltistr. 2
DE 86916 Kaufering
Deutschland
T +49 8191 90-0, F +49 8191 90-1122
de.kundenservice@hilti.com

Department issuing data specification sheet

Hilti AG
Feldkircherstraße 100
P.O. Box 333
HAG 9494 Schaan
Liechtenstein
T +423 234 2111, F +423 234 2965
www.hilti.com

1.4. Emergency telephone number

Emergency number	Emergency CONTACT (24-Hour-Number): GBK GmbH Global Regulatory Compliance +49 (0)6132-84463
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302
Carcinogenicity, Category 2	H351
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07

GHS08

Signal word (CLP)

Warning

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Contains	2,2',6,6'-Tetrabromo-4,4'-isopropylidenediphenol, oligomeric reaction products with Propylene oxide and n-butyl glycidyl ether; Reaction products of phosphoryl trichloride and 2-methyloxirane
Hazard statements (CLP)	H302 - Harmful if swallowed. H351 - Suspected of causing cancer.
Precautionary statements (CLP)	P280 - Wear protective gloves, protective clothing, eye protection. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
bis(2-dimethylaminoethyl)(methyl)amine (3030-47-5)	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
Silica (112945-52-5; 7631-86-9)	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
2,2',6,6'-Tetrabromo-4,4'-isopropylidenediphenol, oligomeric reaction products with Propylene oxide and n-butyl glycidyl ether (1179964-22-7)	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
2-ethylhexanoic acid (149-57-5)	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
Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	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

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
2,2',6,6'-Tetrabromo-4,4'-isopropylidenediphenol, oligomeric reaction products with Propylene oxide and n-butyl glycidyl ether (1179964-22-7)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Silica (112945-52-5; 7631-86-9)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
bis(2-dimethylaminoethyl)(methyl)amine (3030-47-5)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
2-ethylhexanoic acid (149-57-5)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,2',6,6'-Tetrabromo-4,4'-isopropylidenediphenol, oligomeric reaction products with Propylene oxide and n-butyl glycidyl ether	CAS-No.: 1179964-22-7 EC-No.: 926-564-6 REACH-no: 01-2119971810-36	10 – 25	Acute Tox. 4 (Oral), H302 (ATE=732 mg/kg bodyweight)
Reaction products of phosphoryl trichloride and 2-methyloxirane	CAS-No.: 1244733-77-4 EC-No.: 807-935-0 REACH-no: 01-2119486772-26	10 – 25	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Carc. 2, H351 Aquatic Chronic 3, H412
Silica substance with national workplace exposure limit(s) (DE)	CAS-No.: 112945-52-5; 7631-86-9 EC-No.: 231-545-4 REACH-no: 01-2119379499-16	1 – 2,5	Not classified
bis(2-dimethylaminoethyl)(methyl)amine	CAS-No.: 3030-47-5 EC-No.: 221-201-1 EC Index-No.: 612-109-00-6 REACH-no: 01-2119979537-18	0,1 – 1	Acute Tox. 4 (Oral), H302 (ATE=1330 mg/kg bodyweight) Acute Tox. 3 (Dermal), H311 (ATE=200 mg/kg bodyweight) Skin Corr. 1A, H314 Aquatic Chronic 3, H412
2-ethylhexanoic acid	CAS-No.: 149-57-5 EC-No.: 205-743-6 EC Index-No.: 607-230-00-6 REACH-no: 01-2119488942-23	0,01 – 1	Repr. 2, H361d

Full text of H- and EUH-statements: see section 16

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).
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.
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. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
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. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	Call a poison center or a doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting.

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

Symptoms/effects after skin contact	Irritation. May cause an allergic skin reaction.
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Symptoms/effects after eye contact

Eye irritation.

Symptoms/effects after ingestion

Swallowing a small quantity of this material will result in serious health hazard.

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. 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

Toxic fumes may be released.

5.3. Advice for firefighters

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

Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. 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

6.1.1. For non-emergency personnel

Emergency procedures

Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment

Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.

Emergency procedures

Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Mechanically recover the product. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. 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 13. See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

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Hygiene measures

Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Keep cool. Protect from sunlight. Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products

Strong bases. Strong acids.

Incompatible materials

Sources of ignition. Direct sunlight.

Storage temperature

5 – 25 °C

Storage class (LGK, TRGS 510)

LGK 10 - Combustible liquids

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Silica (7631-86-9)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Kieselsäuren, amorphe
AGW (OEL TWA)	4 mg/m ³ (E)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); 2 - Kolloidale amorphe Kieselsäure (7631-86-9) einschließlich pyrogener Kieselsäure und im Nassverfahren hergestellter Kieselsäure (Fällungskieselsäure, Kieselgel; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves.

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Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses			EN 166, EN 171

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear suitable gloves tested to EN374. Suitable for short-term work or as a splash guard:

Nitrile rubber gloves (> 0.1 mm). In case of permanent product contact:

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
	Nitrile rubber (NBR)	6 (> 480 minutes)	>0,35		
	Butyl rubber	6 (> 480 minutes)	>0,35		

8.2.2.3. Respiratory protection

Respiratory protection:

Not necessary with sufficient ventilation. Ensure good ventilation of the work station. Open windows during application to ensure natural ventilation.

If the occupational exposure limit is exceeded: Wear appropriate mask. (e.g. gas filter type A1-P2 according to EN 14387)

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	light yellow.
Odour	characteristic.
Odour threshold	Not available
Melting point	Not applicable

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Freezing point	Not available
Boiling point	Not available
Flammability	Not applicable, Non flammable.
Lower explosion limit	Not available
Upper explosion limit	Not available
Flash point	> 93 °C
Auto-ignition temperature	Not available
Decomposition temperature	Not available
pH	Not available
Viscosity, kinematic	Not available
Solubility	Not available
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	Not available
Vapour pressure at 50°C	Not available
Density	Not available
Relative density	1,1 – 1,25
Relative vapour density at 20°C	Not available
Particle characteristics	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions. Not established.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

Water, humidity. Direct sunlight. Heat. Open flame. 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. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

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ATE CLP (oral)	1237,309 mg/kg bodyweight
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bis(2-dimethylaminoethyl)(methyl)amine (3030-47-5)	
LD50 oral rat	1330 mg/kg
LD50 dermal rabbit	200 – 1000 mg/kg
LC50 Inhalation - Rat (Vapours)	2,05 mg/l/4h

Silica (7631-86-9)	
LD50 oral rat	> 5000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	5110 mg/kg
LD50 dermal rabbit	> 2000 mg/kg bodyweight (24 h, Rabbit, Experimental value, Dermal, 2 day(s))
LD50 dermal	5000 mg/kg
LC50 Inhalation - Rat	> 5,01 mg/l (OECD 436: Acute inhalation toxicity-acute toxic class method, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 15 day(s))

2,2',6,6'-Tetrabromo-4,4'-isopropylidenediphenol, oligomeric reaction products with Propylene oxide and n-butyl glycidyl ether (1179964-22-7)	
LD50 oral rat	732 mg/kg
LD50 dermal rat	> 2000 mg/kg

2-ethylhexanoic acid (149-57-5)	
LD50 oral rat	3640 mg/kg
LD50 oral	2043 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg

Skin corrosion/irritation	Not classified
Additional information	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Not classified
Additional information	Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	Not classified
Additional information	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Not classified
Additional information	Based on available data, the classification criteria are not met
Carcinogenicity	Suspected of causing cancer.
Additional information	Based on available data, the classification criteria are not met

Silica (7631-86-9)	
IARC group	3 - Not classifiable

Reproductive toxicity	Not classified
Additional information	Based on available data, the classification criteria are not met
STOT-single exposure	Not classified
Additional information	Based on available data, the classification criteria are not met
STOT-repeated exposure	Not classified
Additional information	Based on available data, the classification criteria are not met
Aspiration hazard	Not classified
Additional information	Based on available data, the classification criteria are not met

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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

11.2.2. Other information

Potential adverse human health effects and symptoms Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) Not classified

Hazardous to the aquatic environment, long-term (chronic) Not classified

bis(2-dimethylaminoethyl)(methyl)amine (3030-47-5)

LC50 - Fish [1]	220 mg/l <i>Leuciscus idus</i> (Goldorfe), (DIN 38412 Teil 15)
LC50 - Fish [2]	157 mg/l <i>Oncorhynchus mykiss</i> (OECD 203)
EC50 - Crustacea [1]	54,9 mg/l <i>Daphnia magna</i>
EC50 72h - Algae [1]	78,3 mg/l <i>Desmodesmus subspicatus</i>

Silica (7631-86-9)

LC50 - Fish [1]	10000 mg/l (96 h, <i>Brachydanio rerio</i> , Literature)
EC50 - Crustacea [1]	10000 mg/l (24 h, <i>Daphnia magna</i> , Literature)
EC50 72h - Algae [1]	> 173,1 mg/l (OECD 201: Alga, Growth Inhibition Test, <i>Desmodesmus subspicatus</i> , Static system, Fresh water, Experimental value, GLP)

2-ethylhexanoic acid (149-57-5)

LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, <i>Oryzias latipes</i> , Semi-static system, Fresh water, Experimental value, GLP)
LC50 - Fish [2]	> 250 mg/l <i>Leuciscus idus</i> (golden orfe)
EC50 - Crustacea [1]	85,4 mg/l (EPA 600/4-85/013: Method for measuring the acute toxicity of effluents to freshwater and marine organisms, 48 h, <i>Daphnia magna</i> , Static system, Fresh water, Experimental value, GLP)
EC50 72h - Algae [1]	61 mg/l
ErC50 algae	485 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, <i>Pseudokirchneriella subcapitata</i> , Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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Silica (7631-86-9)

Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)

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Silica (7631-86-9)	
ThOD	Not applicable (inorganic)

2,2',6,6'-Tetrabromo-4,4'-isopropylidenediphenol, oligomeric reaction products with Propylene oxide and n-butyl glycidyl ether (1179964-22-7)	
Persistence and degradability	biologically not degradable.

2-ethylhexanoic acid (149-57-5)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1,2 g O ₂ /g substance
Chemical oxygen demand (COD)	2,113 – 2,24 g O ₂ /g substance

12.3. Bioaccumulative potential

CF 101, A / CF Z 200, A	
Bioaccumulative potential	Not established.

Silica (7631-86-9)	
Bioaccumulative potential	Not bioaccumulative.

2,2',6,6'-Tetrabromo-4,4'-isopropylidenediphenol, oligomeric reaction products with Propylene oxide and n-butyl glycidyl ether (1179964-22-7)	
Partition coefficient n-octanol/water (Log Pow)	4,8

2-ethylhexanoic acid (149-57-5)	
Partition coefficient n-octanol/water (Log Pow)	2,7 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Silica (7631-86-9)	
Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available.

2-ethylhexanoic acid (149-57-5)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1,4 – 1,6 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information Avoid release to the environment.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Ecological information	Avoid release to the environment.
European List of Waste (LoW, EC 2000/532)	08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances
HP Code	HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure. HP7 - "Carcinogenic:" waste which induces cancer or increases its incidence

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID /

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions

Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK)

WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).

Major Accidents Ordinance (12. BImSchV)

Is not subject to the Major Accidents Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
		Added	TCPP: Carc. 2, H351

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit

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Abbreviations and acronyms:	
TRGS	Technical Rules for Hazardous Substances
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disrupting properties
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
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
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
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

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Abbreviations and acronyms:	
SDS	Safety Data Sheet
STP	Sewage treatment plant

Data sources	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Other information	None.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Carc. 2	Carcinogenicity, Category 2
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H412	Harmful to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Acute Tox. 4 (Oral)	H302	Calculation method
Carc. 2	H351	Calculation method

SDS_EU_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.