

CFS-FFX/CP660

Safety information for 2-Component-products

Issue date: 21/11/2024 Revision date: 21/11/2024 Supersedes: 01/08/2024 Version: 7.3

SECTION 1: Kit identification

1.1 Product identifier

Trade name CFS-F FX / CP 660
Product code BU Fire Protection



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

Hilti (Schweiz) AG Soodstrasse 61 8134 Adliswil - Schweiz T +41 844 84 84 85 - F +41 844 84 84 86 info@hilti.ch

SECTION 2: General information

Switzerland

Swiss CPID No KIT: 360666-38; CP 660, A: 571419-25, CP 660, B: 571420-22

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 (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]

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CFS-F FX / CP 660

Kit Safety Information Sheet (SIS)

Hazard pictograms (CLP)





Signal word (CLP) Danger

Hazardous ingredients 4,4'-diphenylmethanediisocyanate, isomeres and homologues; Ethylenediamine, ethoxylated

and propoxylated

Hazard statements (CLP) 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.

Precautionary statements (CLP) P260 - Do not breathe vapours.

P280 - Wear eye protection, protective clothing, protective gloves. P284 - In case of inadequate ventilation wear respiratory protection.

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

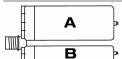
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P342+P311 - If experiencing respiratory symptoms: Call a doctor, a POISON CENTER. As from 24 August 2023 adequate training is required before industrial or professional use

Extra phrases

Additional information



Name	General description	Quantity	Unit	Classification according to Regulation (EC) No. 1272/2008 [CLP]
CFS-F FX, A / CP 660, A		1	pcs (pieces)	Skin Sens. 1, H317
CFS-F FX, B / CP 660, B		1	pcs (pieces)	Acute Tox. 4 (Inhalation:dust,mist), 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

SECTION 4: General information

General advice For professional users only

SECTION 5: Safe handling advice

Environmental precautions Avoid release to the environment Storage conditions Store in a well-ventilated place.

Keep cool.

Precautions for safe handling 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

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CFS-F FX / CP 660

Kit Safety Information Sheet (SIS)

In case of inadequate ventilation wear respiratory protection.

Take up liquid spill into absorbent material Methods for cleaning up

Notify authorities if product enters sewers or public waters

SECTION 6: First aid measures

First-aid measures after ingestion

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. 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 with plenty of water/...

If skin irritation or rash occurs. Get medical advice/attention.

Take off contaminated clothing.

First-aid measures general If you feel unwell, seek medical advice (show the label where possible)

Eye irritation Symptoms/effects after eye contact

Symptoms/effects after inhalation May cause respiratory irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Irritation Symptoms/effects after skin contact

May cause an allergic skin reaction.

Other medical advice or treatment Treat symptomatically

SECTION 7: Fire fighting measures

Protection during firefighting Self-contained breathing apparatus

Complete protective clothing

Toxic fumes may be released Hazardous decomposition products in case of

fire

Carbon dioxide Carbon monoxide

SECTION 8: Other information

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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
 CFS-F FX, A / CP 660, A

 UFI
 AR4G-FWTW-1628-26VC

Swiss CPID No 571419-25
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 Firestop foam

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 (Schweiz) AG Hilti AG

 Soodstrasse 61
 Feldkircherstraße 100

 CH 8134 Adliswil
 FL 9494 Schaan

 Schweiz
 Liechtenstein

 T +41 844 84 85, F +41 844 84 86
 T +423 234 2111

info@hilti.ch product.compliance-fire.protection@hilti.com

1.4. Emergency telephone number

Emergency number Emergency CONTACT (24-Hour-Number):

GBK GmbH Global Regulatory Compliance

+49 (0)6132-84463

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin sensitisation, Category 1 H317

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

Adverse physicochemical, human health and environmental effects

May cause an allergic skin reaction.

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

Signal word (CLP) Warning

Contains Ethylenediamine, ethoxylated and propoxylated



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Hazard statements (CLP)

H317 - May cause an allergic skin reaction.

Precautionary statements (CLP)

P280 - Wear protective gloves, protective clothing, eye 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.

2.3. Other hazards

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

Component			
polyethylene glycol (25322-68-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII		
2-octyl-2H-isothiazol-3-one (26530-20-1)	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		
Ethylenediamine, propoxylated (25214-63-5)	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		
Ethylenediamine, ethoxylated and propoxylated (26316-40-5)	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		
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one (55965-84-9)	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		
iron(III) oxide (1309-37-1)	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			
polyethylene glycol (25322-68-3)	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		
iron(III) oxide (1309-37-1)	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		
Ethylenediamine, propoxylated (25214-63-5)	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		
Ethylenediamine, ethoxylated and propoxylated (26316-40-5)	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-octyl-2H-isothiazol-3-one (26530-20-1)	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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Component				
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one (55965-84-9)	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			

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
polyethylene glycol Stoff mit nationalem Arbeitsplatzgrenzwert (CH)	CAS-No.: 25322-68-3 EC-No.: 500-038-2 REACH-no: 01-2119958801- 32	25 – 40	Not classified
iron(III) oxide Stoff mit nationalem Arbeitsplatzgrenzwert (CH)	CAS-No.: 1309-37-1 EC-No.: 215-168-2 REACH-no: 01-2119457614- 35	2.5 – 5	Not classified
Ethylenediamine, propoxylated	CAS-No.: 25214-63-5 EC-No.: 500-035-6 REACH-no: 01-2119471485- 32	2,5 - <5	Eye Irrit. 2, H319
Ethylenediamine, ethoxylated and propoxylated	CAS-No.: 26316-40-5 EC-No.: 500-047-1 REACH-no: 01-2119471488- 26	2,5 - <5	Eye Irrit. 2, H319 Skin Sens. 1, H317
2-octyl-2H-isothiazol-3-one Stoff mit nationalem Arbeitsplatzgrenzwert (CH)	CAS-No.: 26530-20-1 EC-No.: 247-761-7 EC Index-No.: 613-112-00-5	<0.0015	Acute Tox. 2 (Inhalation), H330 (ATE=0.27 mg/l) Acute Tox. 3 (Dermal), H311 (ATE=311 mg/kg bodyweight) Acute Tox. 3 (Oral), H301 (ATE=125 mg/kg bodyweight) Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) EUH071



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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one Stoff mit nationalem Arbeitsplatzgrenzwert (CH)	CAS-No.: 55965-84-9 EC Index-No.: 613-167-00-5	<0,0015	Acute Tox. 3 (Oral), H301 (ATE=66 mg/kg bodyweight) Acute Tox. 2 (Dermal), H310 (ATE=50 mg/kg bodyweight) Acute Tox. 2 (Inhalation), H330 (ATE=0.05 mg/l/4h) Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) EUH071

Specific concentration limits:			
Name	Product identifier	Specific concentration limits	
2-octyl-2H-isothiazol-3-one	CAS-No.: 26530-20-1 EC-No.: 247-761-7 EC Index-No.: 613-112-00-5	(0.0015 ≤ C ≤ 100) Skin Sens. 1A, H317	
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one	CAS-No.: 55965-84-9 EC Index-No.: 613-167-00-5	$(0.0015 \le C \le 100)$ Skin Sens. 1A, H317 $(0.06 \le C < 0.6)$ Skin Irrit. 2, H315 $(0.06 \le C < 0.6)$ Eye Irrit. 2, H319 $(0.6 \le C \le 100)$ Skin Corr. 1C, H314 $(0.6 \le C \le 100)$ Eye Dam. 1, H318	

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 after inhalation Remove person to fresh air and keep comfortable for breathing.

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 Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with

water for several minutes. 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 skin contact May cause an allergic skin reaction.

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.

5.2. Special hazards arising from the substance or mixture

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



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5.3. Advice for firefighters

Protection during firefighting 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. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment For further information refer to section 8: "Exposure controls/personal protection". Use

personal protective equipment as required.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Take up liquid spill into absorbent material.

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 Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear

personal protective equipment.

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. Keep cool.

Storage temperature $5-25\,^{\circ}\text{C}$

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

polyethylene glycol (25322-68-3)		
Switzerland - Occupational Exposure Limits		
Local name	Polyéthylèneglycols (PEG) / Polyethylenglykole (PEG) [Polyethylenoxid]	
MAK (OEL TWA)	500 mg/m³	
Critical toxicity	MCorp / KG	
Notation	SS _C / SS _C	
Regulatory reference	www.suva.ch, 01.01.2023	



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2-octyl-2H-isothiazol-3-one (26530-20-1)			
Switzerland - Occupational Exposure Limits			
Local name	2-n-Octyle-2,3-dihydroisothiazole-3-one		
MAK (OEL TWA)	0.05 mg/m³		
KZGW (OEL STEL)	0.1 mg/m³		
Remark	4x15		
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one ar	nd 2-methylisothiazol-3(2H)-one (55965-84-9)		
Switzerland - Occupational Exposure Limits			
Local name	2,3-Dihydro-isothiazol-3-one de 5-chloro-2-méthyle et 2,3-dihydro-isothiazol-3-one de 2-méthyle [2,3-Dihydro-isothiazol-3-one de 5-chloro-2-méthyle, 2,3-Dihydro-isothiazol-3-one de 2-méthyle] / 5-Chlor-2-methyl-2,3-dihydro-isothiazol-3-on und 2-Methyl-2,3-dihydroisothiazol-3-on [2-Methyl-2,3-dihydroisothiazol-3-on, 5-Chlor-2-methyl-2,3-dihydroisothiazol-3-on]		
MAK (OEL TWA)	0.2 mg/m³ (i) / (e)		
KZGW (OEL STEL)	0.4 mg/m³ (i) / (e)		
Critical toxicity	VRS, Peau, Yeux / OAW, Haut, Auge		
Notation	S, SS _C / S, SS _C		
Regulatory reference	www.suva.ch, 01.01.2023		
iron(III) oxide (1309-37-1)			
Switzerland - Occupational Exposure Limits			
Local name	Oxydes de fer / Eisenoxide		
MAK (OEL TWA)	3 mg/m³ (a) / (a)		
Critical toxicity	Poumons, Fibpulm / Lunge, Lungenfibrose		
Remark	NIOSH		
Regulatory reference	www.suva.ch, 01.01.2023		

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. Safety glasses. Gloves. Avoid all unnecessary exposure.



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Personal protective equipment symbol(s):







8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

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

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.

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid Colour red. Odour Not available Odour threshold Not available Melting point Not applicable Freezing point Not available Boiling point Not available Flammability Not applicable Lower explosion limit Not available Not available Upper explosion limit Flash point Not applicable. Not available Auto-ignition temperature Not available Decomposition temperature



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Not determined 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 ≈ 1.17 g/cm³ Density Not available Relative density 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.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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) Not classified

polyethylene glycol (25322-68-3)		
LD50 oral rat	31600 mg/kg (Rat, Oral)	
LD50 dermal rabbit	> 20000 mg/kg (Rabbit, Dermal)	
2-octyl-2H-isothiazol-3-one (26530-20-1)		
LD50 oral rat	550 mg/kg (Rat, Literature study, Oral)	
LD50 oral	355 mg/kg	
LD50 dermal rabbit	690 mg/kg bodyweight (Rabbit, Literature study, Dermal)	



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2-octyl-2H-isothiazol-3-one (26530-20-1)			
LD50 dermal	311 mg/kg		
LC50 Inhalation - Rat	> 2 mg/m³ (4 h, Rat, Literature study, Inhalation (vapours))		
LC50 Inhalation - Rat (Dust/Mist)	0.586 mg/l/4h		
Ethylenediamine, ethoxylated and propoxylated (2	6316-40-5)		
LD50 oral rat	> 5000 mg/kg bodyweight		
LD50 dermal rabbit	> 5000 mg/kg bodyweight		
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one a	nd 2-methylisothiazol-3(2H)-one (55965-84-9)		
LD50 oral rat	66 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Calculated by reference to active substance, Oral, 14 day(s))		
LD50 dermal rat	> 141 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))		
LC50 Inhalation - Rat	0.17 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Calculated by reference to active substance, Inhalation (dust), 14 day(s))		
iron(III) oxide (1309-37-1)			
LD50 oral rat	> 10000 mg/kg bodyweight (Rat, Male, Experimental value, Oral)		
LD50 oral	10000 mg/kg		
LC50 Inhalation - Rat	5.05 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))		
LC50 Inhalation - Rat (Dust/Mist)	5.05 mg/l/4h		
Skin corrosion/irritation	Not classified pH: Not determined		
Serious eye damage/irritation	Not classified pH: Not determined		
Respiratory or skin sensitisation	May cause an allergic skin reaction.		
Germ cell mutagenicity	Not classified		
Carcinogenicity	Not classified		
iron(III) oxide (1309-37-1)			
IARC group	3 - Not classifiable		
Reproductive toxicity	Not classified		
STOT-single exposure	Not classified		
STOT-repeated exposure	Not classified		
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



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Hazardous to the aquatic environment, long–term (chronic)	Not classified	
polyethylene glycol (25322-68-3)		
LC50 - Fish [1]	> 10000 mg/l (48 h, Cyprinidae sp.)	
2-octyl-2H-isothiazol-3-one (26530-20-1)		
LC50 - Fish [1]	0.14 mg/l (96 h, Pimephales promelas, Literature study)	
LC50 - Fish [2]	0.05 mg/l (96 h, Oncorhynchus mykiss, Literature study)	
EC50 - Crustacea [1]	0.18 mg/l (48 h, Daphnia magna, Literature study)	
EC50 - Crustacea [2]	0.32 mg/l (48 h, Daphnia magna, Literature study)	
NOEC chronic fish	0.012 mg/l	
Ethylenediamine, propoxylated (25214-63-5)		
LC50 - Fish [1]	4500 mg/l Leuciscus idus (golden orfe)	
EC50 72h - Algae [1]	35 mg/l	
NOEC chronic crustacea	> 1 mg/l	
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one (55965-84-9)		
LC50 - Fish [1]	0.19 mg/l (EPA OPP 72-1, 96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value, GLP)	
EC50 - Crustacea [1]	0.007 mg/l (48 h, Acartia tonsa, Salt water, Experimental value, GLP)	
ErC50 algae	19.9 μg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Skeletonema costatum, Static system, Salt water, Experimental value, GLP)	
iron(III) oxide (1309-37-1)		
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna,	

12.2. Persistence and degradability

12.2. Persistence and degradability			
polyethylene glycol (25322-68-3)			
Persistence and degradability	Readily biodegradable in water.		
Chemical oxygen demand (COD)	1.74 g O ₂ /g substance		
2-octyl-2H-isothiazol-3-one (26530-20-1)	2-octyl-2H-isothiazol-3-one (26530-20-1)		
Persistence and degradability Inherently biodegradable.			
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one (55965-84-9)			
Persistence and degradability	Not readily biodegradable in water.		
iron(III) oxide (1309-37-1)			
Persistence and degradability	Biodegradability: not applicable.		
Chemical oxygen demand (COD)	Not applicable (inorganic)		
ThOD	Not applicable (inorganic)		

Static system, Fresh water, Experimental value, GLP)



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12.3. Bioaccumulative potential

polyethylene glycol (25322-68-3)		
Partition coefficient n-octanol/water (Log Pow)	<-1	
Bioaccumulative potential	Not bioaccumulative.	
2-octyl-2H-isothiazol-3-one (26530-20-1)		
BCF - Fish [1]	1280 (67 day(s), Lepomis macrochirus, Flow-through system, Literature study)	
Partition coefficient n-octanol/water (Log Pow)	2.45 (Experimental value)	
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).	
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one (55965-84-9)		
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one ar	nd 2-methylisothiazol-3(2H)-one (55965-84-9)	
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one ar	dd 2-methylisothiazol-3(2H)-one (55965-84-9) 41 – 54 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight)	
	41 – 54 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Lepomis	
BCF - Fish [1]	41 – 54 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight) -0.32 – 0.7 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC	
BCF - Fish [1] Partition coefficient n-octanol/water (Log Pow)	41 – 54 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight) -0.32 – 0.7 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 20 °C)	

12.4. Mobility in soil

2-octyl-2H-isothiazol-3-one (26530-20-1)		
Ecology - soil	No (test)data on mobility of the substance available.	
Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one (55965-84-9)		
Surface tension	No data available in the literature	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.81 – 1 (log Koc, Calculated value)	
Ecology - soil	Highly mobile in soil.	
iron(III) oxide (1309-37-1)		
Surface tension	Not applicable (solid)	
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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods Product/Packaging disposal recommendations Dispose of contents/container in accordance with licensed collector's sorting instructions. Dispose in a safe manner in accordance with local/national regulations.



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Additional information

packaging containing residues of or contaminated by dangerous substances. Dispose in a safe manner in accordance with local/national regulations.

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

08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances

HP Code

HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID /

ADR	IMDG	IATA	RID
14.1. UN number or ID num	nber		
Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping I	name		
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard cla	ss(es)		·
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			-
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazar	ds		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information	on available		I

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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)



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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

Switzerland

Swiss National Regulations

Article 4, subparagraph 4 Order on the protection of young workers (OLT 5, RS 822.115) and Article 1, letter f Order of the DEFR on dangerous works for young workers (822.115.2): Young workers undergoing initial professional training cannot work with this product (this substance/this preparation) except where envisaged in the order of professional training to achieve the training purposes and if the training plan conditions and applicable age limits are respected. Young workers who do not undergo initial professional training cannot work with this product (this substance/this preparation). Workers of either sex aged under 18 years old are considered as young.

Swiss CPID No 571419-25

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Modified.

Indication of changes			
Section	Changed item	Change	Comments
			Mal-Code

Abbreviations and acronyms:		
CAS-No.	Chemical Abstract Service number	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	



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Abbreviations and acrony	yms:	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
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	
N.O.S.	Not Otherwise Specified	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
vPvB	Very Persistent and Very Bioaccumulative	
WGK	Water Hazard Class	
VOC	Volatile Organic Compounds	
SDS	Safety Data Sheet	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
PNEC	Predicted No-Effect Concentration	
PBT	Persistent Bioaccumulative Toxic	
OEL	Occupational Exposure Limit	
OECD	Organisation for Economic Co-operation and Development	
COD	Chemical oxygen demand (COD)	
ThOD	Theoretical oxygen demand (ThOD)	
TRGS	Technical Rules for Hazardous Substances	



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Abbreviations and acronyms:		
TLM	Median Tolerance Limit	
STP	Sewage treatment plant	

Full text of H- and EUH-s	tatements:		
Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2		
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2		
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3		
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3		
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1		
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1		
EUH071	Corrosive to the respiratory tract.		
Eye Dam. 1	Serious eye damage/eye irritation, Category 1		
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2		
H301	Toxic if swallowed.		
H310	Fatal in contact with skin.		
H311	Toxic in contact with skin.		
H314	Causes severe skin burns and eye damage.		
H315	Causes skin irritation.		
H317	May cause an allergic skin reaction.		
H318	Causes serious eye damage.		
H319	Causes serious eye irritation.		
H330	Fatal if inhaled.		
H400	Very toxic to aquatic life.		
H410	Very toxic to aquatic life with long lasting effects.		
Skin Corr. 1	Skin corrosion/irritation, Category 1		
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C		
Skin Irrit. 2	Skin corrosion/irritation, Category 2		
Skin Sens. 1	Skin sensitisation, Category 1		
Skin Sens. 1A	Skin sensitisation, category 1A		

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:			
Skin Sens. 1	H317	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: 21/11/2024 Revision date: 21/11/2024 Supersedes version of: 01/08/2024 Version: 7.3

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

1.1. Product identifier

Product form Mixture

 Trade name
 CFS-F FX, B / CP 660, B

 UFI
 F5EY-8STE-712P-RNAW

Swiss CPID No 571420-22
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
Use of the substance/mixture Firestop foam

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 (Schweiz) AG Hilti A

 Soodstrasse 61
 Feldkircherstraße 100

 CH 8134 Adliswil
 FL 9494 Schaan

 Schweiz
 Liechtenstein

 T +41 844 84 85, F +41 844 84 86
 T +423 234 2111

info@hilti.ch product.compliance-fire.protection@hilti.com

1.4. Emergency telephone number

Emergency number Emergency CONTACT (24-Hour-Number):

GBK GmbH Global Regulatory Compliance

+49 (0)6132-84463

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 Respiratory sensitisation, Category 1 H334 Skin sensitisation, Category 1 H317 Carcinogenicity, Category 2 H351 Specific target organ toxicity - Single exposure, Category 3, Respiratory H335 tract irritation 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)

Contains

tains 4.4

Hazard statements (CLP)

4,4'-diphenylmethanediisocyanate, isomeres and homologues; 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate

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 (respiratory system) through prolonged or repeated

exposure (inhalation).

Precautionary statements (CLP)

P260 - Do not breathe vapours.

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

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

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

Component	
4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	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
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	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			
4,4'-diphenylmethanediisocyanate, isomeres and	The substance is not included in the list established in accordance with Article 59(1) of		
homologues (9016-87-9)	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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Component			
4,4'-methylenediphenyl diisocyanate;	The substance is not included in the list established in accordance with Article 59(1) of		
diphenylmethane-4,4'-diisocyanate (101-68-8)	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		

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4,4'-diphenylmethanediisocyanate, isomeres and homologues	CAS-No.: 9016-87-9 EC-No.: 618-498-9	50 – 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
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014- 47	20 – 40	Acute Tox. 4 (Inhalation:dust,mist), 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		
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-	(0.1 ≤ C ≤ 100) Resp. Sens. 1, H334 (5 ≤ C ≤ 100) Eye Irrit. 2, H319 (5 ≤ C ≤ 100) Skin Irrit. 2, H315 (5 ≤ C ≤ 100) STOT SE 3, H335		

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



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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. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If breathing is difficult, remove victim to fresh air and keep at rest in a position 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 with plenty of water/.... Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). If skin irritation or rash

occurs

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. 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.

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. Danger of serious damage to health by prolonged exposure through

inhalation. May cause an allergic skin reaction.

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

Symptoms/effects after eye contact Eye irritation. Causes serious 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. 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. Carbon dioxide. Carbon monoxide.

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 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. Do not breathe vapours. Avoid contact with skin and eyes. Evacuate

unnecessary personnel.

6.1.2. For emergency responders

Protective equipment Use personal protective equipment as required. For further information refer to section 8:

"Exposure controls/personal protection". Equip cleanup crew with proper protection.

Emergency procedures Ventilate area

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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 Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or

diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

Other information

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 Do not handle until all safety precautions have been read and understood. Wear personal

protective equipment. Do not eat, drink or smoke when using this product. 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. Use only outdoors or in a well-ventilated area. Avoid

breathing dust/fume/gas/mist/vapours/spray. Obtain special instructions before use.

Hygiene measures

Wash contaminated clothing before reuse. 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. Contaminated work clothing should not be allowed out of the

workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well

ventilated place away from : Keep container tightly closed.

Incompatible products Strong bases. Strong acids.

Incompatible materials Sources of ignition. Direct sunlight.

Storage temperature 5-25 °C

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)		
Switzerland - Occupational Exposure Limits		
Local name 4,4'-Diisocyanate de diphénylméthane / Diphenylmethan-4,4'-diisocyanat		
Notation R, SS _c , B / H, SS _c , B		
Regulatory reference www.suva.ch, 01.01.2023		

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



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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:

Gloves. Protective clothing. Safety glasses. Avoid all unnecessary exposure.

Personal protective equipment symbol(s):







8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses. ISO 16321-1. EN 170

Eye protection			
Туре	Field of application	Characteristics	Standard
Safety glasses	Droplet		EN 166, EN 170

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

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.



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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, Non flammable.

Lower explosion limit Not available Upper explosion limit Not available Flash point > 200 °C Auto-ignition temperature Not available Decomposition temperature Not available Not available 299.766 mm²/s Viscosity, kinematic Viscosity, dynamic 346.23 mPa·s Solubility Not available Not available Partition coefficient n-octanol/water (Log Kow) 0.1 mbar Vapour pressure Vapour pressure at 50°C Not available Density 1.155 kg/l Relative density Not available 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.



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10.3. Possibility of hazardous reactions

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

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

STOT-single exposure

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 in	formation			
	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.			
CFS-F FX, B / CP 660, B				
ATE CLP (dust,mist)	1.5 mg/l/4h			
4,4'-diphenylmethanediisocyanate, isome	eres 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			
4,4'-methylenediphenyl diisocyanate; dip	henylmethane-4,4'-diisocyanate (101-68-8)			
LD50 oral rat	> 2000 mg/kg			
LD50 oral	31600 mg/kg			
LD50 dermal rabbit	> 9400 mg/kg			
LC50 Inhalation - Rat (Dust/Mist)	> 0.368 mg/l/4h			
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			
Additional information	Based on available data, the classification criteria are not met			
Carcinogenicity	Suspected of causing cancer.			
4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)				
IARC group	3 - Not classifiable			
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)				
IARC group	3 - Not classifiable			
Reproductive toxicity	Not classified			
Additional information	Based on available data, the classification criteria are not met			

May cause respiratory irritation.



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4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)			
STOT-single exposure	May cause respiratory irritation.		
4,4'-methylenediphenyl diisocyanate; diphenylmeth	ane-4,4'-diisocyanate (101-68-8)		
STOT-single exposure	May cause respiratory irritation.		
STOT-repeated exposure	May cause damage to organs (respiratory system) through prolonged or repeated exposure (inhalation).		
4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)			
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.		
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)			
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.		
Aspiration hazard	Not classified		
Additional information	Based on available data, the classification criteria are not met		
CFS-F FX, B / CP 660, B			
Viscosity, kinematic	299.766 mm²/s		

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

11.2.2. Other information

Potential adverse human health effects and

Harmful if inhaled.

symptoms

SECTION 12: Ecological information

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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

CFS-F FX, B / CP 660, B			
Persistence and degradability Not established.			
4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)			
Persistence and degradability Not readily biodegradable in water.			

12.3. Bioaccumulative potential

CFS-F FX, B / CP 660, B	
Bioaccumulative potential	Not established.

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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

CFS-F FX, B / CP 660, B

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

Product/Packaging disposal recommendations

Additional information

Ecological information

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

HP Code

Dispose of contents/container in accordance with licensed collector's sorting instructions. 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.

packaging containing residues of or contaminated by dangerous substances. Dispose in a safe manner in accordance with local/national regulations.

Avoid release to the environment.

08 05 01* - waste isocyanates

08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances

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



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In accordance with ADR / IMDG / IATA / RID /

ADR	IMDG	IATA	RID
14.1. UN number or ID num	ber		
Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping n	ame		
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard clas	ss(es)		
Not regulated	t regulated Not regulated Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazard	ls		
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information	n available		

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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.	CFS-F FX, B / CP 660, B; 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate

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)



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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

Switzerland

Swiss National Regulations

Article 4, subparagraph 4 Order on the protection of young workers (OLT 5, RS 822.115) and Article 1, letter f Order of the DEFR on dangerous works for young workers (822.115.2): Young workers undergoing initial professional training cannot work with this product (this substance/this preparation) except where envisaged in the order of professional training to achieve the training purposes and if the training plan conditions and applicable age limits are respected. Young workers who do not undergo initial professional training cannot work with this product (this substance/this preparation). Workers of either sex aged under 18 years old are considered as young.

Artikel 13 Mutterschutzverordnung (SR 822.111.52):

Schwangere Frauen und stillende Mütter dürfen bei ihrer Arbeit nur dann mit dieser Zubereitung in Kontakt kommen oder dieser ausgesetzt werden, wenn auf Grund einer Risikobeurteilung durch eine Fachperson feststeht, dass im Kontext mit den Tätigkeiten und den getroffenen Schutzmassnahmen die Exposition zu keinen Schädigungen für Mutter und Kind führt.

LK 6.1 - Toxic materials

571420-22

Storage class (LK) Swiss CPID No

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
3		Modified	MAI-Code

Abbreviations and acronyms:		
CAS-No.	Chemical Abstract Service number	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	



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Abbreviations and acronyms:		
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
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	
N.O.S.	Not Otherwise Specified	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	
NOEC	No-Observed Effect Concentration	
vPvB	Very Persistent and Very Bioaccumulative	
WGK	Water Hazard Class	
VOC	Volatile Organic Compounds	
SDS	Safety Data Sheet	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
PNEC	Predicted No-Effect Concentration	
PBT	Persistent Bioaccumulative Toxic	
OEL	Occupational Exposure Limit	
OECD	Organisation for Economic Co-operation and Development	
COD	Chemical oxygen demand (COD)	
ThOD	Theoretical oxygen demand (ThOD)	
TRGS	Technical Rules for Hazardous Substances	
TLM	Median Tolerance Limit	
STP	Sewage treatment plant	



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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. 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
Resp. Sens. 1	H334	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.