

CF I 750 / CF I 750 B2

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 06/04/2022 Revision date: 06/04/2022 Supersedes version of: 11/01/2022

Version: 2.0

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

1.1. Product identifier

Product form	Mixture
Trade name	CF I 750 / CF I 750 B2
Product code	BU Fire Protection Foam
Vaporizer	Aerosol

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

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

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

Department issuing data specification sheet

Hilti AG
Feldkircherstraße 100
9494 Schaan - Liechtenstein
T +423 234 2111
chemicals.hse@hilti.com

1.4. Emergency telephone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international)
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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] Mixtures/Substances: SDS EU > 2015: According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

Aerosol, Category 1	H222;H229
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
Reproductive toxicity, Additional category, Effects on or via lactation	H362
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Specific target organ toxicity – Repeated exposure, Category 2	H373
Hazardous to the aquatic environment – Chronic Hazard, Category 4	H413
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

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

Hazard pictograms (CLP)



GHS02

GHS07

GHS08

Signal word (CLP)

Danger

Contains

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

Hazard statements (CLP)

H222 - Extremely flammable aerosol.

H229 - Pressurised container: May burst if heated.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 - May cause respiratory irritation.

H351 - Suspected of causing cancer.

H362 - May cause harm to breast-fed children.

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

H413 - May cause long lasting harmful effects to aquatic life.

Precautionary statements (CLP)

P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P211 - Do not spray on an open flame or other ignition source.

P251 - Pressurized container: Do not pierce or burn, even after use.

P260 - Do not breathe spray.

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

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Extra phrases

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

UFI

UHSR-M1JK-AQN8-Y9UC

2.3. Other hazards

Contains PBT/vPvB substances $\geq 0.1\%$ 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
tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	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
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)	This substance meets the PBT criteria of REACH regulation, annex XIII This substance meets the vPvB criteria of REACH regulation, annex XIII
halogenated polyetherpolyol (86675-46-9)	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
Dimethyl ether (115-10-6)	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 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 at a concentration equal to or greater than 0,1 %

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Component	
4,4'-diphenylmethanediisocyanate, isomeres and homologues(9016-87-9)	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
tris(2-chloro-1-methylethyl) phosphate(13674-84-5)	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
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins)(85535-85-9)	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
halogenated polyetherpolyol(86675-46-9)	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
Dimethyl ether(115-10-6)	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]
4,4'-diphenylmethanediisocyanate, isomeres and homologues	CAS-No. 9016-87-9	30 – 60	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
tris(2-chloro-1-methylethyl) phosphate	CAS-No. 13674-84-5 EC-No. 237-158-7 REACH-no 01-2119447716-31	10 – 25	Acute Tox. 4 (Oral), H302 (ATE=1101 mg/kg bodyweight)
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) substance listed as REACH Candidate (Medium-chain chlorinated paraffins (MCCP) (UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17)) PBT substance; vPvB substance	CAS-No. 85535-85-9 EC-No. 287-477-0 EC Index-No. 602-095-00-X REACH-no 01-2119519269-33	10 – 20	Lact., H362 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=10) EUH066
halogenated polyetherpolyol	CAS-No. 86675-46-9 REACH-no 01-2119472128-37	10 – 15	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight)

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dimethyl ether substance with a Community workplace exposure limit	CAS-No. 115-10-6 EC-No. 204-065-8 EC Index-No. 603-019-00-8 REACH-no 01-2119472128-37	5 – 10	Flam. Gas 1A, H220 Press. Gas (Comp.), H280

Specific concentration limits:

Name	Product identifier	Specific concentration limits
4,4'-diphenylmethanediisocyanate, isomers and homologues	CAS-No. 9016-87-9	(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

Product subject to CLP Article 1.1.3.7. The disclosure rules of the components is modified in this case.

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. Call a poison center or a 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: Get immediate medical advice/attention.
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. Rinse mouth. Do NOT induce vomiting.

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. 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

Fire hazard	Extremely flammable aerosol.
Explosion hazard	Pressurised container: May burst if heated.
Hazardous decomposition products in case of fire	Toxic fumes may be released. Vapours may form explosive mixture with air.

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 enter fire area without proper protective equipment, including respiratory protection. Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures

Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe spray. Avoid contact with skin and eyes. 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

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

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

Technical measures

The EKAS guidelines must be taken into account.

Storage conditions

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

Heat and ignition sources

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

7.3. Specific end use(s)

No additional information available

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SECTION 8 Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Dimethyl ether (115-10-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Dimethylether
IOEL TWA	1920 mg/m ³
IOEL TWA [ppm]	1000 ppm
Switzerland - Occupational Exposure Limits	
Local name	Ether diméthylque
MAK (OEL TWA) [1]	1910 mg/m ³
MAK (OEL TWA) [2]	1000 ppm

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

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

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

Protective gloves. Wear protective gloves.

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

8.2.2.3. Respiratory protection

Respiratory protection

Not necessary with sufficient ventilation. In case of inadequate ventilation wear respiratory protection.

Device	Filter type	Condition	Standard
Aerosol mask	Type A - High-boiling (>65 °C) organic compounds		

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls

Avoid release to the environment.

Consumer exposure controls

Avoid contact during pregnancy/while nursing.

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	Grey.
Appearance	Aerosol.
Odour	characteristic.
Odour threshold	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Flammability	Extremely flammable aerosol.
Explosive properties	Pressurised container: May burst if heated.
Explosive limits	Not available
Lower explosive limit (LEL)	1.5 vol %
Upper explosive limit (UEL)	11 vol %

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Flash point	< 0 °C propellant
Auto-ignition temperature	> 350 °C propellant
Decomposition temperature	Not available
pH	Not available
Viscosity, kinematic	Not available
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	Not available
Vapour pressure	> 500 kPa
Vapour pressure at 50 °C	Not available
Density	≤ 1.3 g/cm³
Relative density	Not available
Relative vapour density at 20 °C	Not available
Particle size	Not applicable
Particle size distribution	Not applicable
Particle shape	Not applicable
Particle aspect ratio	Not applicable
Particle aggregation state	Not applicable
Particle agglomeration state	Not applicable
Particle specific surface area	Not applicable
Particle dustiness	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

% of flammable ingredients 54.9999999999996

9.2.2. Other safety characteristics

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions. Not established.

10.3. Possibility of hazardous reactions

Heating may cause a fire or explosion. Not established.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

No additional information available. 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)	Not classified.
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified.

4,4'-diphenylmethanediisocyanate, isomers 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)

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4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
LC50 Inhalation - Rat (Dust/Mist)	0.49 mg/l/4h
ATE CLP (gases)	4500 ppmv/4h
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	1.5 mg/l/4h
Dimethyl ether (115-10-6)	
ATE CLP (gases)	164000 ppmv/4h
ATE CLP (vapours)	309 mg/l/4h
ATE CLP (dust,mist)	309 mg/l/4h
tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
LD50 oral rat	1101 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral)
LD50 oral	1150 – 1750
LD50 dermal rabbit	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 5 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
ATE CLP (oral)	1101 mg/kg bodyweight
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)	
LD50 oral rat	> 4000 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 13500 mg/kg bodyweight (24 h, Rabbit, Read-across, Dermal)
LC50 Inhalation - Rat	> 48.17 mg/l air (1 h, Rat, Read-across, Inhalation (vapours))
halogenated polyetherpolyol (86675-46-9)	
ATE CLP (oral)	500 mg/kg bodyweight
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Suspected of causing cancer.
4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
IARC group	3 - Not classifiable
Reproductive toxicity	May cause harm to breast-fed children.
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
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Vaporizer	Aerosol

11.2. Information on other hazards

No additional information available

SECTION 12 Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	Not classified.
Hazardous to the aquatic environment, long-term (chronic)	May cause long lasting harmful effects to aquatic life.

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
LC50 - Other aquatic organisms [1]	> 1000 mg/l (96 h, Literature study)

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Dimethyl ether (115-10-6)	
LC50 - Fish [1]	> 4100 mg/l (NEN 6504: Water - Determination of toxicity with Poecilia reticulata, 96 h, Poecilia reticulata, Semi-static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	> 4400 mg/l (NEN 6501: Water - Determination of toxicity with Daphnia magna, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Lethal)
EC50 96h - Algae [1]	154.9 mg/l (ECOSAR v1.00, Algae, QSAR, Estimated value)
tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
LC50 - Fish [1]	51 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	131 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	82 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)	
LC50 - Fish [1]	> 5000 mg/l (Equivalent or similar to OECD 203, 96 h, Alburnus alburnus, Static system, Brackish water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	0.006 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 algae	> 3.2 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
Persistence and degradability	Not readily biodegradable in water.
Dimethyl ether (115-10-6)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
Persistence and degradability	Not readily biodegradable in water.
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)	
Persistence and degradability	Not readily biodegradable in the soil. Not readily biodegradable in water.

12.3. Bioaccumulative potential

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
BCF - Fish [1]	1 (Pisces, Literature study)
Partition coefficient n-octanol/water (Log Pow)	10.46 (Calculated, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Dimethyl ether (115-10-6)	
Partition coefficient n-octanol/water (Log Pow)	0.1 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
BCF - Fish [1]	0.8 – 2.8 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), Pisces, Flow-through system, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	2.68 (Experimental value, Equivalent or similar to OECD 117)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)	
BCF - Fish [1]	6660 – 9140 l/kg (OECD 305: Bioconcentration: Flow-Through Fish Test, 35 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.7 – 8.3 (Experimental value, Equivalent or similar to OECD 117)
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).

12.4. Mobility in soil

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

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Dimethyl ether (115-10-6)	
Surface tension	No data available in the literature
Ecology - soil	Not applicable (gas).
tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.24 (log Koc, OECD 106: Adsorption/Desorption Using a Batch Equilibrium Method, Read-across)
Ecology - soil	Low potential for adsorption in soil.
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	5 – 5.2 (log Koc, Experimental value)
Ecology - soil	Low potential for mobility in soil.

12.5. Results of PBT and vPvB assessment

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
tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	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
Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9)	This substance meets the PBT criteria of REACH regulation, annex XIII This substance meets the vPvB criteria of REACH regulation, annex XIII
halogenated polyetherpolyol (86675-46-9)	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
Dimethyl ether (115-10-6)	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

No additional information available

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	After curing, the product can be disposed of with household waste. . 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.
Ecology - waste materials	Avoid release to the environment.
European List of Waste (LoW) code	08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances 08 05 01* - waste isocyanates

SECTION 14: Transport information






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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1950	UN 1950	UN 1950	UN 1950	UN 1950

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

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: 5F
Special provisions (ADR)	: 190, 327, 344, 625
Limited quantities (ADR)	: 1I
Packing instructions (ADR)	: P207, LP02
Mixed packing provisions (ADR)	: MP9
Transport category (ADR)	: 2
Tunnel restriction code (ADR)	: D

Transport by sea

Special provisions (IMDG)	: 63, 190, 277, 327, 344, 959
Limited quantities (IMDG)	: SP277
Packing instructions (IMDG)	: P207, LP02
EmS-No. (Fire)	: F-D
EmS-No. (Spillage)	: S-U
Stowage category (IMDG)	: None
MFAG-No	: 126

Air transport

PCA packing instructions (IATA)	: 203
PCA max net quantity (IATA)	: 75kg
CAO packing instructions (IATA)	: 203
Special provisions (IATA)	: A145, A167, A802

Inland waterway transport

Classification code (ADN)	: 5F
Special provisions (ADN)	: 19, 327, 344, 625
Limited quantities (ADN)	: 1 L

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Excepted quantities (ADN) : E0
 Equipment required (ADN) : PP, EX, A
 Ventilation (ADN) : VE01, VE04
 Number of blue cones/lights (ADN) : 1

Rail transport

Special provisions (RID) : 190, 327, 344, 625
 Limited quantities (RID) : 1L
 Packing instructions (RID) : P207, LP02

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

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
74.	4,4'-diphenylmethanediisocyanate, isomeres and homologues

Contains a substance on the REACH candidate list: Medium-chain chlorinated paraffins (MCCP) (UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17) (EC 287-477-0, CAS 85535-85-9)

Contains no REACH Annex XIV substances

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

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Switzerland

Storage class (LK) LK 2 - Liquefied or pressurized gases

15.2. Chemical safety assessment

No additional information available

SECTION 16 Other information

Indication of changes:

Section	Changed item	Change	Comments
2.3			MCCP-SVHC PBT, vPvB

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aerosol 1	Aerosol, Category 1
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
Carc. 2	Carcinogenicity, Category 2
EUH066	Repeated exposure may cause skin dryness or cracking.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1A	Flammable gases, Category 1A
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.

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Full text of H- and EUH-statements:	
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H362	May cause harm to breast-fed children.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Lact.	Reproductive toxicity, Additional category, Effects on or via lactation
Press. Gas (Comp.)	Gases under pressure : Compressed gas
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]		
Aerosol 1	H222;H229	On basis of test data
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
Lact.	H362	Calculation method
STOT SE 3	H335	Calculation method
STOT RE 2	H373	Calculation method
Aquatic Chronic 4	H413	Expert judgment

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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.