CFS-F SOL; CP 620

Safety information for 2-Component-products

Date of issue: 19/12/2017 Revision date: 19/12/2017 Supersedes: 03/10/2016 Version: 7.0

SECTION 1: Kit identification

1.1 Product identifier

Trade name: CFS-F SOL; CP 620

Product code: BU Fire Protection

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

Hilti Far East Private Ltd.
No 20 Harbour Drive,
#06-06/08 PSA Vista
117612 Singapore - Singapur
T +65 6777 7887 - F +65 6777 3057
sg-customerservice@hilti.com

SECTION 2: General information

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

GHS-SG classification

Health hazards	Acute toxicity (inhal.), Category 4 Skin corrosion/irritation, Category 2 Serious eye damage/eye irritation, Category 2 Respiratory sensitisation, Category 1 Skin sensitisation, Category 1 Carcinogenicity, Category 2 Reproductive toxicity, Category 2 Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation Specific target organ toxicity — Repeated exposure, Category 2
Environmental hazards	Hazardous to the aquatic environment — Chronic Hazard, Category 1

Label elements

GHS-SG labelling

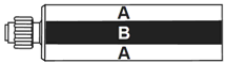
Hazard pictograms (GHS-SG)

GHS07 GHS08

Signal word (GHS-SG)	Danger
Hazardous ingredients	4,4'-diphenylmethanediisocyanate, isomeres and homologues; zinc borate
Hazard statements (GHS-SG)	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. H361 - Suspected of damaging fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (GHS-SG)	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.

Additional information



Name	General description	Quantity	Unit	GHS-SG classification
CFS-F SOL / CP 620, B		1	pcs	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
CFS-F SOL / CP 620, A (RoW)		1	pcs	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Repr. 2, H361 Aquatic Chronic 3, H412

SECTION 4: General advice

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 In case of inadequate ventilation wear respiratory protection.
Methods for cleaning up	Take up liquid spill into absorbent material Notify authorities if product enters sewers or public waters

SECTION 6: First aid measures

First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	Call a poison center or a doctor if you feel unwell

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)
Symptoms/effects after eye contact	Eye irritation
Symptoms/effects after inhalation	May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	Irritation 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
Hazardous decomposition products in case of fire	Toxic fumes may be released Carbon dioxide Carbon monoxide

SECTION 8: Other information

No data available

CFS-F SOL / CP 620, A

Safety Data Sheet

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

Version: 7.0 Revision date: 19.12.2017 Date of issue: 19.12.2017

Supersedes: 03.10.2016

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

1.1. Product identifier

Trade name	CFS-F SOL / CP 620, A
Product code	BU Fire Protection

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

No additional information available

1.4. Supplier's details

Supplier
Hilti Far East Private Ltd.
No 20 Harbour Drive,
#06-06/08 PSA Vista
117612 Singapore - Singapur
T +65 6777 7887 - F +65 6777 3057
sg-customerservice@hilti.com

Department issuing data specification sheet
Hilti AG
Feldkircherstraße 100
9494 Schaan - Liechtenstein
T +423 234 2111
chemicals.hse@hilti.com

1.5. Emergency telephone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +65 6777 7887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Health hazards	Skin corrosion/irritation, Category 2 Serious eye damage/eye irritation, Category 2 Reproductive toxicity, Category 2

2.2. Label elements

Hazard pictograms (GHS-SG)

GHS07 GHS08

Signal word (GHS-SG)	Warning
Hazard statements (GHS-SG)	H315 - Causes skin irritation. H319 - Causes serious eye irritation. H361 - Suspected of damaging fertility or the unborn child.
Precautionary statements	
Prevention	Wear eye protection, protective clothing, protective gloves. (P280)
Response	IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Concentration(%)	Formula	Product identifier
Ethylenediamine, propoxylated	25 - 40		(CAS-No.) 25214-63-5 (EC-No.) 500-035-6 (EC Index-No.)
tris(2-chloro-1-methylethyl) phosphate	2.5 - 5	C9H18Cl3O4P	(CAS-No.) 13674-84-5 (EC-No.) 237-158-7 (EC Index-No.)
Bis(2-dimethylaminoethyl) ether	0.1 - 1	C8H20N2O	(CAS-No.) 3033-62-3 (EC-No.) 221-220-5 (EC Index-No.)
2-(2-(2-Dimethylaminoethoxy)-ethyl-methyl-amino)ethanol	1 - 2.5		(CAS-No.) 83016-70-0 (EC-No.) 406-080-7 (EC Index-No.) 603-146-00-9
hexaboron dizinc undecaoxide	2.5 - 5	B6Zn2O11	(CAS-No.) 12767-90-7 (EC-No.) 235-804-2 (EC Index-No.)

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: IF exposed or concerned: Get medical advice/attention.

Inhalation: Remove person to fresh air and keep comfortable for breathing.

Skin contact: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.

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.

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: Irritation.

Symptoms/effects after eye contact: Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Special Protective actions for the fire fighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1.For non-emergency personnel

Emergency procedures: Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2.For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes.

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 locked up. Store in a well-ventilated place. Keep cool.

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

No additional information available

8.2. Monitoring

No additional information available

8.3. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.4. Personal protective equipment

Hand protection: Protective gloves

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

Eye protection

Type	Use	Characteristics	Standard
Safety glasses	Droplet		EN 166, EN 170

Skin and body protection — Wear suitable protective clothing

Respiratory protection — [In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls — Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	red.
Odour	No data available
Odour threshold	No data available
pH	Not determined
Relative evaporation rate (butylacetate=1)	No data available
Melting point	Not applicable
Freezing point	No data available
Boiling point	No data available
Flash point	Not applicable.
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Not applicable
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	≈ 1.17 g/cm³
Solubility	No data available
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidising properties	No data available
Explosive limits	No data available

9.2. Other information

VOC content — 15 mg/l EPA method 24 (CP 620, Comp. A + B)

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. Effects on humans

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

11.2. Acute toxicity

CFS-F SOL / CP 620, A			
Oral	Rat	LD_{50}	No data available
	Mouse	LD_{50}	No data available
Inhalation	Rat	LC_{50}	No data available
	Mouse	LC_{50}	No data available
Dermal	Rabbit	LD_{50}	No data available
	Mouse	LD_{50}	No data available

tris(2-chloro-1-methylethyl) phosphate (13674-84-5)			
Oral	Rat	LD_{50}	1150 - 1750 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value; 1011-1824 mg/kg bodyweight; Rat; Experimental value)
Dermal	Rabbit	LD_{50}	> 2000 mg/kg bodyweight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)

Bis(2-dimethylaminoethyl) ether (3033-62-3)			
Oral	Rat	LD_{50}	677 mg/kg bodyweight (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 603 mg/kg bodyweight; Rat; OECD 401: Acute Oral Toxicity; Experimental value; 708 mg/kg bodyweight; Rat; OECD 401: Acute Oral Toxicity; Experimental value)
Dermal	Rabbit	LD_{50}	0.406 (Rabbit; Experimental value; Equivalent or similar to OECD 402; 0.633; Rabbit; Experimental value; Equivalent or similar to OECD 402; 0.373; Rabbit; Experimental value; Equivalent or similar to OECD 402; 0.367; Rabbit; Experimental value; Equivalent or similar to OECD 402)

11.3. Skin corrosion/irritation - Description

No data available

11.4. Serious eye damage/eye irritation - Description

No data available

11.5. Skin or Respiratory sensitization - Description

No data available

11.6. Germ cell mutagenicity - Description

No data available

11.7. Carcinogenicity

No data available

11.8. Reproductive toxicity - Description

No data available

11.9. Specific target organ toxicity (single exposure) - Description

No data available

11.10. Specific target organ toxicity (repeated exposure) - Description

No data available

11.11. Aspiration hazard - Description

No data available

11.12. Other health hazard

No data available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	Harmful to aquatic life with long lasting effects.
Acute aquatic toxicity	Not classified
Chronic aquatic toxicity	Not classified

tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
LC50 fish 1	98 mg/l (96 h; Pimephales promelas; GLP)
EC50 Daphnia 1	65 - 335 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	56.2 mg/l (96 h; Brachydanio rerio)
Threshold limit algae 1	73 mg/l (96 h; Selenastrum capricornutum; Growth rate)

Bis(2-dimethylaminoethyl) ether (3033-62-3)	
LC50 fish 1	131.2 mg/l (96 h; Danio rerio; GLP)
EC50 Daphnia 1	102 mg/l (48 h; Daphnia magna; GLP)
Threshold limit algae 1	24 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)
Threshold limit algae 2	4.7 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)

hexaboron dizinc undecaoxide (12767-90-7)	
LC50 fish 1	2.4 mg/l (LC50; 96 h)
EC50 Daphnia 1	76 mg/l (LC50; 48 h)

12.2. Persistence and degradability

tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.

Bis(2-dimethylaminoethyl) ether (3033-62-3)	
Persistence and degradability	Not readily biodegradable in water. Adsorbs into the soil. Photolysis in the air.

hexaboron dizinc undecaoxide (12767-90-7)	
Persistence and degradability	Biodegradability: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
BCF fish 1	0.8 - 4.6 (Cyprinus carpio; Test duration: 6 weeks)
Log Pow	2.59 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Bis(2-dimethylaminoethyl) ether (3033-62-3)	
Log Pow	-0.339 (Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 20 °C; -0.54; Calculated)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Ozone: Not classified

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: Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

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

ADR	IMDG	IATA	RID
14.1. UN number			
Not regulated for transport			
14.2. UN proper shipping name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
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
No supplementary information available			

14.6. Special precautions for user

- Overland transport

- Transport by sea

No data available

- Air transport

No data available

- Rail transport

Carriage prohibited (RID) No

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

SECTION 15: Regulatory information

15.1. National regulations

No data available

15.2. International Regulations

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

Skin Irrit. 2	H315
Eye Irrit. 2	H319
Repr. 2	H361
Aquatic Chronic 3	H412

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

15.3. Chemical inventory status

No additional information available

SECTION 16: Other information

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.

H412	Harmful to aquatic life with long lasting effects.

SDS_SG_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

CFS-F SOL / CP 620, B

Safety Data Sheet

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

Version: 7.0 Revision date: 19.12.2017 Date of issue: 19.12.2017

Supersedes: 03.10.2016

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

1.1. Product identifier

Trade name	CFS-F SOL / CP 620, B
Product code	BU Fire Protection

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

No additional information available

1.4. Supplier's details

Hilti Far East Private Ltd.
No 20 Harbour Drive,
#06-06/08 PSA Vista
117612 Singapore - Singapur
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sg-customerservice@hilti.com

Supplier
Hilti Far East Private Ltd.
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Feldkircherstraße 100
9494 Schaan - Liechtenstein
T +423 234 2111
chemicals.hse@hilti.com

1.5. Emergency telephone number

Emergency number	Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +65 6777 7887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Health hazards	Acute toxicity (inhal.), Category 4 Skin corrosion/irritation, Category 2 Serious eye damage/eye irritation, Category 2 Respiratory sensitisation, Category 1 Skin sensitisation, Category 1 Carcinogenicity, Category 2 Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation Specific target organ toxicity — Repeated exposure, Category 2

2.2. Label elements

Hazard pictograms (GHS-SG)

GHS07 GHS08

Signal word (GHS-SG) Danger

Hazard statements (GHS-SG)	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	
Prevention	Do not breathe vapours. (P260) Wear eye protection, protective clothing, protective gloves. (P280) [In case of inadequate ventilation] wear respiratory protection. (P284)
Response	IF ON SKIN: Wash with plenty of water. (P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) If experiencing respiratory symptoms: Call a doctor, a POISON CENTER. (P342+P311)

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Concentration(%)	Formula	Product identifier
4,4'-diphenylmethanediisocyanate, isomeres and homologues	54 - 90	C15H10N2O2-(C8H5NO)x	(CAS-No.) 9016-87-9 (EC-No.) (EC Index-No.)
4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate	27 - 54		(CAS-No.) 101-68-8 (EC-No.) 202-966-0 (EC Index-No.) 615-005-00-9
tris(2-chloro-1-methylethyl) phosphate	5 - 10	C9H18Cl3O4P	(CAS-No.) 13674-84-5 (EC-No.) 237-158-7 (EC Index-No.)

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
Skin contact	Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
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.
Ingestion	Call a poison center or a doctor if you feel unwell.

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

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

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Special Protective actions for the fire fighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1.For non-emergency personnel

Emergency procedures	Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2.For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
Hygiene measures	Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
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

No additional information available

8.2. Monitoring

No additional information available

8.3. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.4. Personal protective equipment

Hand protection

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

Eye protection

Type	Use	Characteristics	Standard
Safety glasses	Droplet		EN 166, EN 170

Skin and body protection: Wear suitable protective clothing

Respiratory protection: [In case of inadequate ventilation] wear respiratory protection.

Device	Filter type	Condition	Standard
	Filter AX (brown)		

Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	amber.
Odour	No data available
Odour threshold	No data available
pH	No data available
Relative evaporation rate (butylacetate=1)	No data available
Melting point	Not applicable
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available

Decomposition temperature	No data available
Flammability (solid, gas)	Not applicable
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	≈ g/cm³
Solubility	No data available
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidising properties	No data available
Explosive limits	No data available

9.2. Other information

VOC content: 15 g/l EPA method 24 (CP 620, Comp. A + B)

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. Effects on humans

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

11.2. Acute toxicity

CFS-F SOL / CP 620, B			
Oral	Rat	LD_{50}	No data available
	Mouse	LD_{50}	No data available
Inhalation	Rat	LC_{50}	No data available

	Mouse	LC_{50}	No data available
Dermal	Rabbit	LD_{50}	No data available
	Mouse	LD_{50}	No data available

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)			
Oral	Rat	LD_{50}	> 10000 mg/kg (Rat; Literature study)
Dermal	Rabbit	LD_{50}	> 5000 mg/kg (Rabbit; Literature study)

4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8)			
Oral	Rat	LD_{50}	> 2000 mg/kg

tris(2-chloro-1-methylethyl) phosphate (13674-84-5)			
Oral	Rat	LD_{50}	1150 - 1750 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value; 1011-1824 mg/kg bodyweight; Rat; Experimental value)
Dermal	Rabbit	LD_{50}	> 2000 mg/kg bodyweight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)

11.3. Skin corrosion/irritation - Description

No data available

11.4. Serious eye damage/eye irritation - Description

No data available

11.5. Skin or Respiratory sensitization - Description

No data available

11.6. Germ cell mutagenicity - Description

No data available

11.7. Carcinogenicity

No data available

11.8. Reproductive toxicity - Description

No data available

11.9. Specific target organ toxicity (single exposure) - Description

No data available

11.10. Specific target organ toxicity (repeated exposure) - Description

No data available

11.11. Aspiration hazard - Description

No data available

11.12. Other health hazard

No data 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.
Acute aquatic toxicity	Not classified
Chronic aquatic toxicity	Not classified

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h)

tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
LC50 fish 1	98 mg/l (96 h; Pimephales promelas; GLP)
EC50 Daphnia 1	65 - 335 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	56.2 mg/l (96 h; Brachydanio rerio)
Threshold limit algae 1	73 mg/l (96 h; Selenastrum capricornutum; Growth rate)

12.2. Persistence and degradability

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
Persistence and degradability	Not readily biodegradable in water. Hydrolysis in water. No (test)data on mobility of the substance available.

tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.

12.3. Bioaccumulative potential

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
BCF fish 1	1 (Pisces)
Bioaccumulative potential	Not bioaccumulative.

tris(2-chloro-1-methylethyl) phosphate (13674-84-5)	
BCF fish 1	0.8 - 4.6 (Cyprinus carpio; Test duration: 6 weeks)
Log Pow	2.59 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Ozone	Not classified
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	Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

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

ADR	IMDG	IATA	RID
14.1. UN number			
Not regulated for transport			
14.2. UN proper shipping name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
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
No supplementary information available			

14.6. Special precautions for user

- Overland transport

- Transport by sea

No data available

- Air transport

No data available

- Rail transport

Carriage prohibited (RID) No

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

SECTION 15: Regulatory information

15.1. National regulations

No data available

15.2. International Regulations

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 hazard classes and H-statements : see section 16

15.3. Chemical inventory status

No additional information available

SECTION 16: Other information

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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
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.
H373	May cause damage to organs through prolonged or repeated exposure.

SDS_SG_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