

CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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

Issue date: 30/11/2021

Revision date: :

Version: 1.0

SECTION 1: Identification

1.1. GHS Product identifier

| | |
|--------------|---------------------------------------|
| Product form | Mixture |
| Trade name | CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV |
| UN-No. (ADR) | 1950 |
| Product code | BU Fire Protection Foam |

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

| | |
|------------------------------|-----------------------|
| Use of the substance/mixture | PU installation foams |
|------------------------------|-----------------------|

1.4. Supplier's details

| Supplier | Department issuing data specification sheet |
|--------------------------------------|---|
| Hilti Emirates L.L.C. | Hilti AG |
| Dubai Investment Park | Feldkircherstraße 100 |
| P.O. Box 11051 | 9494 Schaan - Liechtenstein |
| Dubai - United Arab Emirates | T +423 234 2111 |
| T +971 800 44584 - F +971 4 885 4405 | |

1.5. Emergency phone number

| | |
|------------------|--|
| Emergency number | Schweizerisches Toxikologisches Informationszentrum – 24h Service +41 44 251 51 51 (international) +971 4 8019694 800-Hilti (44584) (Toll free) |
|------------------|--|

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

| | | |
|--|-----------|-----------------------|
| Aerosol, Category 1 | H222;H229 | On basis of test data |
| Skin corrosion/irritation, Category 2 | H315 | Calculation method |
| Serious eye damage/eye irritation, Category 2 | H319 | Calculation method |
| Respiratory sensitisation, Category 1 | H334 | Calculation method |
| Skin sensitisation, Category 1 | H317 | Calculation method |
| Carcinogenicity, Category 2 | H351 | Calculation method |
| Reproductive toxicity, Additional category, Effects on or via lactation | H362 | Calculation method |
| Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | H335 | Calculation method |
| Specific target organ toxicity — Repeated exposure, Category 2 | H373 | Calculation method |
| Hazardous to the aquatic environment — Chronic Hazard, Category 4 | H413 | Expert judgment |

Full text of H-statements: see section 16

CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS UN)



GHS02

GHS07

GHS08

Signal word (GHS UN)

Danger

Hazardous ingredients

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

Hazard statements (GHS UN)

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

Precautionary statements (GHS UN)

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

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to the United Nations GHS |
|--|------------------------|---------|--|
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues | (CAS-No.) 9016-87-9 | 10 – 30 | Flammable liquids Not classified Acute toxicity (oral) Not classified Acute toxicity (dermal) Not classified Acute toxicity (inhal.), Category 4, H332 Skin corrosion/irritation, Category 2, H315 Serious eye damage/eye irritation, Category 2A, H319 Respiratory sensitisation, Category 1, H334 Skin sensitisation, Category 1, H317 Carcinogenicity, Category 2, H351 Specific target organ toxicity — Single exposure, Category 3, H335 Respiratory tract irritation, H335 Specific target organ toxicity — Repeated exposure, Category 2, H373 |
| Reaction products of phosphoryl trichloride and 2-methyloxirane (TCPP) | (CAS-No.) 1244733-77-4 | 5 – 10 | Acute toxicity (oral), Category 4, H302 |
| Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) | (CAS-No.) 85535-85-9 | 5 – 10 | Flammable liquids Not classified Acute toxicity (dermal) Not classified |

CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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

| | | | |
|--|--|--|---|
| | | | Reproductive toxicity, Additional category, Effects on or via lactation, H362 Hazardous to the aquatic environment — Acute Hazard, Category 1, H400 Hazardous to the aquatic environment — Chronic Hazard, Category 1, H410 |
|--|--|--|---|

Full text of H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

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

4.2. Most important symptoms/effects, 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 immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Specific hazards arising from the chemical

| | |
|--|---|
| 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. Special protective actions for 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. No open flames, no sparks, and no smoking. Do not breathe 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". |
|----------------------|---|

CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-------------------------------|--|
| Precautions for safe handling | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact during pregnancy/while nursing. Do not breathe spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. May form flammable/explosive vapour-air mixture. |
| Hygiene measures | Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|---------------------------|---|
| Storage conditions | Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep cool. |
| Heat and ignition sources | Keep away from heat and direct sunlight. Keep away from ignition sources. |
| Storage temperature | 5 – 25 °C |

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

| | |
|----------------------------------|--|
| Appropriate engineering controls | Ensure good ventilation of the work station. |
| Environmental exposure controls | Avoid release to the environment. |

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

| | |
|-----------------|-------------------|
| Hand protection | Protective gloves |
|-----------------|-------------------|

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

Eye protection

| Type | Field of application | Characteristics | Standard |
|----------------|----------------------|-----------------|----------------|
| Safety glasses | | | EN 166, EN 171 |

| | |
|--------------------------|---|
| Skin and body protection | Wear suitable protective clothing |
| 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 | | |

Personal protective equipment symbol(s)

CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

| | |
|---|------------------------------|
| Physical state | Liquid |
| Appearance | Aerosol |
| Colour | light brown. |
| Odour | slight. ether-like odour. |
| Odour threshold | Not available |
| Melting point | Not available |
| Freezing point | Not available |
| Boiling point | -42 °C |
| Flammability (solid, gas) | Extremely flammable aerosol. |
| Explosive limits | Not available |
| Lower explosive limit (LEL) | 0.4 vol % |
| Upper explosive limit (UEL) | 32 vol % |
| Flash point | -104 °C |
| Auto-ignition temperature | Not available |
| Decomposition temperature | Not available |
| pH | Not available |
| pH solution | Not available |
| Viscosity, kinematic (calculated value) (40 °C) | Not available |
| Partition coefficient n-octanol/water (Log Kow) | Not available |
| Vapour pressure | Not available |
| Vapour pressure at 50 °C | Not available |
| Density | 1 g/cm ³ |
| Relative density | Not available |
| Relative vapour density at 20 °C | Not available |
| Solubility | Not available |
| Particle size | Not applicable |
| Particle size distribution | Not applicable |
| Particle shape | Not applicable |
| Particle aspect ratio | Not applicable |
| Particle specific surface area | Not applicable |

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Heating may cause a fire or explosion.

10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

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

| | |
|-----------------------------------|---|
| Skin corrosion/irritation | Causes skin irritation. |
| Serious eye damage/irritation | Causes serious eye irritation. |
| Respiratory or skin sensitisation | May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. |
| Germ cell mutagenicity | Not classified |
| Carcinogenicity | Suspected of causing cancer. |
| Reproductive toxicity | May cause harm to breast-fed children. |
| STOT-single exposure | May cause respiratory irritation. |
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |
| Aspiration hazard | Not classified |

| | |
|---------------------------------------|---------|
| CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV | |
| Vaporizer | Aerosol |

SECTION 12: Ecological information

12.1. Toxicity

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

CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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

| | |
|--|---|
| Hazardous to the aquatic environment, long-term (chronic) | May cause long lasting harmful effects to aquatic life. |
| Classification procedure (Hazardous to the aquatic environment, long-term (chronic)) | Expert judgment |

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

| | |
|---|--|
| CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV | |
| Persistence and degradability | No additional information available |
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9) | |
| Not rapidly degradable | |
| 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

| | |
|---|---|
| CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV | |
| Bioaccumulative potential | No additional information available |
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9) | |
| BCF - Fish [1] | 1 (Pisces, Literature study) |
| Partition coefficient n-octanol/water (Log Kow) | 10.46 (Calculated, KOWWIN) |
| 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 Kow) | 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

| | |
|---|---|
| CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV | |
| Mobility in soil | No additional information available |
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9) | |
| Partition coefficient n-octanol/water (Log Koc) | 9.078 – 10.597 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil | Adsorbs into the soil. |
| Alkanes, C14-17, chloro (MCCP, Medium chained chlorinated paraffins) (85535-85-9) | |
| Partition coefficient n-octanol/water (Log Koc) | 5 – 5.2 (log Koc, Experimental value) |
| Ecology - soil | Low potential for mobility in soil. |

12.5. Other adverse effects

| | |
|-----------------------|-------------------------------------|
| Ozone | Not classified |
| Other adverse effects | No additional information available |

CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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

SECTION 13: Disposal considerations

13.1. Disposal 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. |

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 |
| 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 |

CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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

| | |
|-----------------------------------|--------------------|
| 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 |
| 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 specific for the product in question

No additional information available

SECTION 16: Other information

Issue date 30/11/2021

| Full text of H-statements: | |
|----------------------------|---|
| H220 | Extremely flammable gas |
| H222 | Extremely flammable aerosol |
| 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 |



CF-I 50 ECO GV/ CF-F 750/ CF-F 750-GV

Safety Data Sheet

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

| | |
|------|---|
| H351 | Suspected of causing cancer |
| H362 | May cause harm to breast-fed children |
| H373 | May cause damage to organs through prolonged or repeated exposure |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |
| H413 | May cause long lasting harmful effects to aquatic life |

SDS_UN_Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.