

# CFS-F FX / CP 660

## Safety information for 2-Component-products

Issue date: 22/11/2024

Revision date: 22/11/2024

Supersedes: 17/10/2022

Version: 6.2

### SECTION 1: Kit identification

#### 1.1 Product identifier

Trade name

CFS-F FX / CP 660



Product code

BU Fire Protection

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

Hilti (Philippines) Inc.  
2256 Pasong Tamo Extension  
Edsa, Brgy. Magallanes  
1224 Makati City - Philippines  
T +632 784 7100 - F +63 2 784 7100  
[customerservice.ph@hilti.com](mailto:customerservice.ph@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:

#### Classification of the Product

##### Classification according to the United Nations GHS

|                           |      |
|---------------------------|------|
| 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 |

#### Label elements

##### Labelling according to the United Nations GHS

Hazard pictograms (GHS UN)



GHS07

GHS08

Signal word (GHS UN)

Danger

Hazardous ingredients

4,4'-diphenylmethanediisocyanate, isomeres and homologues; Ethylenediamine, ethoxylated and propoxylated

Hazard statements (GHS UN)

H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H332 - Harmful if inhaled.

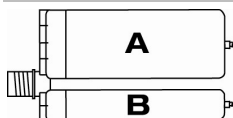
# CFS-F FX / CP 660

## Safety information for 2-Component-products

### Precautionary statements (GHS UN)

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.  
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         | Classification according to the United Nations GHS  |
|-------------------------|---------------------|----------|--------------|---|
| CFS-F FX, A / CP 660, A |                     | 1        | pcs (pieces) | Skin Sens. 1, H317  |
| CFS-F FX, B / CP 660, B |                     | 1        | pcs (pieces) | Acute Tox. 4 (Inhalation:dust,mist), H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317<br>Carc. 2, H351<br>STOT SE 3, H335<br>STOT RE 2, H373 |

### 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.

# CFS-F FX / CP 660

## Safety information for 2-Component-products

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|                                     |   |
|-------------------------------------|---|
| 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.<br>May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Symptoms/effects after skin contact | Irritation<br>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<br>Complete protective clothing |
| Hazardous decomposition products in case of fire | Toxic fumes may be released<br>Carbon dioxide<br>Carbon monoxide   |

### SECTION 8: Other information

# CFS-F FX, A / CP 660, A

## Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

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Supersedes: 17/10/2022

Version: 6.2

### SECTION 1: Identification

#### 1.1. GHS Product identifier

|              |                         |
|--------------|-------------------------|
| Product form | Mixture                 |
| Trade name   | CFS-F FX, A / CP 660, 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

|                              |               |
|------------------------------|---------------|
| Use of the substance/mixture | Firestop foam |
|------------------------------|---------------|

#### 1.4. Supplier's details

##### Supplier

Hilti (Philippines) Inc.  
2256 Pasong Tamo Extension  
Edsa, Brgy. Magallanes  
PH 1224 Makati City  
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T +632 784 7100, F +63 2 784 7100  
[customerservice.ph@hilti.com](mailto:customerservice.ph@hilti.com)

##### Department issuing data specification sheet

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FL 9494 Schaan  
Liechtenstein  
T +423 234 2111  
[product.compliance-fire.protection@hilti.com](mailto:product.compliance-fire.protection@hilti.com)

#### 1.5. Emergency phone number

|                  |  |
|------------------|--|
| Emergency number | Emergency CONTACT (24-Hour-Number):<br>GBK GmbH Global Regulatory Compliance<br>+49 (0)6132-84463<br><br>+632 784 7100 |
|------------------|--|

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification according to the United Nations GHS

|   |                                      |
|---|--------------------------------------|
| Skin sensitisation, Category 1                                  | H317                                 |
| Full text of H-statements: see section 16                       |                                      |
| Adverse physicochemical, human health and environmental effects | May cause an allergic skin reaction. |

#### 2.2. GHS Label elements, including precautionary statements

##### Labelling according to the United Nations GHS

Hazard pictograms (GHS UN)



Signal word (GHS UN)  
Hazardous ingredients  
Hazard statements (GHS UN)  
Precautionary statements (GHS UN)

Warning  
Ethylenediamine, ethoxylated and propoxylated  
H317 - May cause an allergic skin reaction  
P280 - Wear eye protection, protective clothing, protective gloves.  
P302+P352 - IF ON SKIN: Wash with plenty of water.

#### 2.3. Other hazards which do not result in classification

No additional information available

# CFS-F FX, A / CP 660, A

## Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name  | Product identifier  | %        | Classification according to the United Nations GHS   |
|---|---------------------|----------|--|
| Ethylenediamine, propoxylated                 | CAS-No.: 25214-63-5 | 2,5 - <5 | Flammable liquids Not classified<br>Serious eye damage/eye irritation, Category 2A, H319<br>Hazardous to the aquatic environment – Acute Hazard Not classified<br>Hazardous to the aquatic environment – Chronic Hazard Not classified |
| Ethylenediamine, ethoxylated and propoxylated | CAS-No.: 26316-40-5 | 2,5 - <5 | Flammable liquids Not classified<br>Serious eye damage/eye irritation, Category 2A, H319<br>Skin sensitisation, Category 1, H317<br>Serious eye damage/eye irritation, Category 2, H319  |

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

#### 4.2. Most important symptoms/effects, acute and delayed

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| Symptoms/effects after skin contact | May cause an allergic skin reaction. |
|-------------------------------------|--------------------------------------|

#### 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

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

#### 5.3. Special protective actions for fire-fighters

|                                |   |
|--------------------------------|---|
| Protection during firefighting | Self-contained breathing apparatus. Complete protective clothing. |
|--------------------------------|---|



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### Personal protective equipment symbol(s)



### 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          |
| Colour  | red.            |
| Odour   | Not available   |
| Odour threshold                                 | Not available   |
| Melting point                                   | Not applicable  |
| Freezing point                                  | Not available   |
| Boiling point                                   | Not available   |
| Flammability                                    | Not applicable  |
| Lower explosion limit                           | Not available   |
| Upper explosion limit                           | Not available   |
| Flash point                                     | Not applicable. |
| Auto-ignition temperature                       | Not available   |
| Decomposition temperature                       | Not available   |
| pH  | Not determined  |
| 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   | ≈ 1.17 g/cm³    |
| Relative density                                | Not available   |
| Relative vapour density at 20°C                 | Not available   |
| Solubility                                      | Not available   |
| Particle size                                   | Not applicable  |

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

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

No additional information available

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### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

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

| Ethylenediamine, ethoxylated and propoxylated (26316-40-5) |                                      |
|--|--------------------------------------|
| LD50 oral rat  | > 5000 mg/kg bodyweight              |
| LD50 dermal rabbit   | > 5000 mg/kg bodyweight              |
| Skin corrosion/irritation                                  | Not classified<br>pH: Not determined |
| Serious eye damage/irritation                              | Not classified<br>pH: Not determined |
| Respiratory or skin sensitisation                          | May cause an allergic skin reaction. |
| Germ cell mutagenicity                                     | Not classified                       |
| Carcinogenicity  | Not classified                       |
| Reproductive toxicity                                      | Not classified                       |
| STOT-single exposure                                       | Not classified                       |
| STOT-repeated exposure                                     | Not classified                       |
| Aspiration hazard  | Not classified                       |

## SECTION 12: Ecological information

### 12.1. Toxicity

|   |   |
|---|---|
| Ecology - general   | The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Hazardous to the aquatic environment, short-term (acute)  | Not classified  |
| Hazardous to the aquatic environment, long-term (chronic) | Not classified  |

| Ethylenediamine, propoxylated (25214-63-5) |   |
|--|---|
| LC50 - Fish [1]                            | 4500 mg/l <i>Leuciscus idus</i> (golden orfe) |
| EC50 72h - Algae [1]                       | 35 mg/l                                       |
| NOEC chronic crustacea                     | > 1 mg/l                                      |

### 12.2. Persistence and degradability

| CFS-F FX, A / CP 660, A       |                                     |
|-------------------------------|-------------------------------------|
| Persistence and degradability | No additional information available |

### 12.3. Bioaccumulative potential

| CFS-F FX, A / CP 660, A   |                                     |
|---------------------------|-------------------------------------|
| Bioaccumulative potential | No additional information available |

### 12.4. Mobility in soil

| CFS-F FX, A / CP 660, A |                                     |
|-------------------------|-------------------------------------|
| Mobility in soil        | No additional information available |



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### 12.5. Other adverse effects

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

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

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID /

| ADR                                     | IMDG  | IATA                              | RID                               |
|---|---|-----------------------------------|-----------------------------------|
| <b>14.1. UN number or ID number</b>     |   |                                   |                                   |
| Not applicable                          | Not applicable  | Not applicable                    | Not applicable                    |
| <b>14.2. UN proper shipping name</b>    |   |                                   |                                   |
| Not applicable                          | Not applicable  | Not applicable                    | Not applicable                    |
| <b>14.3. Transport hazard class(es)</b> |   |                                   |                                   |
| Not applicable                          | Not applicable  | Not applicable                    | Not applicable                    |
| <b>14.4. Packing group</b>              |   |                                   |                                   |
| Not applicable                          | Not applicable  | Not applicable                    | Not applicable                    |
| <b>14.5. Environmental hazards</b>      |   |                                   |                                   |
| Dangerous for the environment: No       | Dangerous for the environment: No<br>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

No data available

#### Transport by sea

No data available

#### Air transport

No data available

#### Rail transport

No data available

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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## Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

### 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

|                 |            |
|-----------------|------------|
| SDS Major/Minor | None       |
| Issue date      | 22/11/2024 |
| Revision date   | 22/11/2024 |
| Supersedes      | 17/10/2022 |

| Section | Changed item | Change | Comments       |
|---------|--------------|--------|----------------|
|         |              |        | general update |

#### Abbreviations and acronyms

CAS-No. - Chemical Abstract Service number  
 ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
 ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ATE - Acute Toxicity Estimate  
 BCF - Bioconcentration factor  
 BLV - Biological limit value  
 BOD - Biochemical oxygen demand (BOD)  
 CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008  
 DMEL - Derived Minimal Effect level  
 DNEL - Derived-No Effect Level  
 EC-No. - European Community number  
 EC50 - Median effective concentration  
 ED - Endocrine disrupting properties  
 EN - European Standard  
 IARC - International Agency for Research on Cancer  
 IATA - International Air Transport Association  
 IMDG - International Maritime Dangerous Goods  
 IOELV - Indicative Occupational Exposure Limit Value  
 LC50 - Median lethal concentration  
 LD50 - Median lethal dose  
 LOAEL - Lowest Observed Adverse Effect Level  
 N.O.S. - Not Otherwise Specified  
 NOAEC - No-Observed Adverse Effect Concentration  
 NOAEL - No-Observed Adverse Effect Level  
 NOEC - No-Observed Effect Concentration  
 vPvB - Very Persistent and Very Bioaccumulative  
 WGK - Water Hazard Class  
 VOC - Volatile Organic Compounds  
 SDS - Safety Data Sheet  
 RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
 REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006  
 PNEC - Predicted No-Effect Concentration  
 PBT - Persistent Bioaccumulative Toxic  
 OEL - Occupational Exposure Limit  
 OECD - Organisation for Economic Co-operation and Development  
 COD - Chemical oxygen demand (COD)  
 ThOD - Theoretical oxygen demand (ThOD)



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TRGS - Technical Rules for Hazardous Substances  
TLM - Median Tolerance Limit  
STP - Sewage treatment plant

| Full text of H-statements:     |  |
|--------------------------------|--|
| Aquatic Acute Not classified   | Hazardous to the aquatic environment – Acute Hazard Not classified   |
| Aquatic Chronic Not classified | Hazardous to the aquatic environment – Chronic Hazard Not classified |
| Eye Irrit. 2                   | Serious eye damage/eye irritation, Category 2                        |
| Eye Irrit. 2A                  | Serious eye damage/eye irritation, Category 2A                       |
| Flam. Liq. Not classified      | Flammable liquids Not classified                                     |
| H317                           | May cause an allergic skin reaction                                  |
| H319                           | Causes serious eye irritation  |

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.



# CFS-F FX, B / CP 660, B

## Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

Issue date: 22/11/2024 Revision date: 22/11/2024

Supersedes: 17/10/2022

Version: 6.2

### SECTION 1: Identification

#### 1.1. GHS Product identifier

|              |                         |
|--------------|-------------------------|
| Product form | Mixture                 |
| Trade name   | CFS-F FX, B / CP 660, 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

|                              |               |
|------------------------------|---------------|
| Use of the substance/mixture | Firestop foam |
|------------------------------|---------------|

#### 1.4. Supplier's details

##### Supplier

Hilti (Philippines) Inc.  
2256 Pasong Tamo Extension  
Edsa, Brgy. Magallanes  
PH 1224 Makati City  
Philippines  
T +632 784 7100, F +63 2 784 7100  
[customerservice.ph@hilti.com](mailto:customerservice.ph@hilti.com)

##### Department issuing data specification sheet

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Feldkircherstraße 100  
FL 9494 Schaan  
Liechtenstein  
T +423 234 2111  
[product.compliance-fire.protection@hilti.com](mailto:product.compliance-fire.protection@hilti.com)

#### 1.5. Emergency phone number

|                  |  |
|------------------|--|
| Emergency number | Emergency CONTACT (24-Hour-Number):<br>GBK GmbH Global Regulatory Compliance<br>+49 (0)6132-84463<br><br>+632 784 7100 |
|------------------|--|

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification according to the United Nations GHS

|  |      |
|--|------|
| Acute toxicity (inhalation:dust,mist) 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                                   |      |
| Specific target organ toxicity – Repeated exposure, Category 2 | H373 |

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

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

# CFS-F FX, B / CP 660, B

## Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

### 2.2. GHS Label elements, including precautionary statements

#### Labelling according to the United Nations GHS

Hazard pictograms (GHS UN)



Signal word (GHS UN)

Danger

Hazardous ingredients

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

Hazard statements (GHS UN)

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 (GHS UN)

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.

### 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

# CFS-F FX, B / CP 660, B

## Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

### 3.2. Mixtures

| Name   | Product identifier | %       | Classification according to the United Nations GHS  |
|--|--------------------|---------|---|
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues              | CAS-No.: 9016-87-9 | 60 – 80 | Flammable liquids Not classified<br>Acute toxicity (oral) Not classified<br>Acute toxicity (dermal) Not classified<br>Acute toxicity (inhal.), Category 4, H332<br>Skin corrosion/irritation, Category 2, H315<br>Serious eye damage/eye irritation, Category 2, H319<br>Respiratory sensitisation, Category 1, H334<br>Skin sensitisation, Category 1, H317<br>Carcinogenicity, Category 2, H351<br>Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation, H335<br>Specific target organ toxicity – Repeated exposure, Category 2, H373   |
| 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate | CAS-No.: 101-68-8  | 10 – 25 | Acute toxicity (oral) Not classified<br>Acute toxicity (dermal) Not classified<br>Acute toxicity (inhal.), Category 4, H332<br>Acute toxicity (inhalation:dust,mist) Category 4, H332<br>Skin corrosion/irritation, Category 2, H315<br>Serious eye damage/eye irritation, Category 2, H319<br>Serious eye damage/eye irritation, Category 2A, H319<br>Respiratory sensitisation, Category 1, H334<br>Skin sensitisation, Category 1, H317<br>Carcinogenicity, Category 2, H351<br>Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation, H335<br>Specific target organ toxicity – Repeated exposure, Category 2, H373 |

Full text of H-statements: see section 16

# CFS-F FX, B / CP 660, B

## Safety Data Sheet

according to the United Nations GHS (Rev. 9, 2021)

### 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. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. |
| First-aid measures after skin contact | Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention. Wash with plenty of water/.... Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). If skin irritation or rash occurs:                                       |
| First-aid measures after eye contact  | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.  |
| First-aid measures after ingestion    | Call a poison center or a doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.   |

#### 4.2. Most important symptoms/effects, acute and delayed

|   |  |
|---|--|
| Symptoms/effects after inhalation                   | May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause an allergic skin reaction. |
| Symptoms/effects after skin contact                 | Irritation. May cause an allergic skin reaction. Causes skin irritation.   |
| Symptoms/effects after eye contact                  | Eye irritation. Causes serious eye irritation.   |
| Potential adverse human health effects and symptoms | Harmful if inhaled.  |

#### 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. Sand. |
| Unsuitable extinguishing media | Do not use a heavy water stream.                     |

#### 5.2. Specific hazards arising from the chemical

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

#### 5.3. Special protective actions for fire-fighters

|                                |   |
|--------------------------------|---|
| Firefighting instructions      | Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. |
| Protection during firefighting | Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.     |

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

|                      |  |
|----------------------|--|
| Emergency procedures | Ventilate spillage area. Do not breathe vapours. Avoid contact with skin and eyes. Evacuate unnecessary personnel. |
|----------------------|--|

##### 6.1.2. For emergency responders

|                      |  |
|----------------------|--|
| Protective equipment | Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection. |
|----------------------|--|





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| Type           | Field of application | Characteristics | Standard       |
|----------------|----------------------|-----------------|----------------|
| Safety glasses | Droplet              |                 | EN 166, EN 170 |

Skin and body protection

Wear suitable protective clothing

Respiratory protection

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

### Personal protective equipment symbol(s)



### 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                         |
| Colour  | amber.                         |
| Odour   | characteristic.                |
| Odour threshold                                 | Not available                  |
| Melting point                                   | Not applicable                 |
| Freezing point                                  | Not available                  |
| Boiling point                                   | Not available                  |
| Flammability                                    | Not applicable, Non flammable. |
| Lower explosion limit                           | Not available                  |
| Upper explosion limit                           | Not available                  |
| Flash point                                     | > 200 °C                       |
| Auto-ignition temperature                       | Not available                  |
| Decomposition temperature                       | Not available                  |
| pH  | Not available                  |
| pH solution                                     | Not available                  |
| Viscosity, kinematic (calculated value) (40 °C) | 299.766 mm²/s                  |
| Partition coefficient n-octanol/water (Log Kow) | Not available                  |
| Vapour pressure                                 | 0.1 mbar                       |
| Vapour pressure at 50°C                         | Not available                  |
| Density   | 1.155 kg/l                     |
| Relative density                                | Not available                  |
| Relative vapour density at 20°C                 | Not available                  |
| Solubility                                      | Not available                  |
| Viscosity, dynamic                              | 346.23 mPa·s                   |
| Particle size                                   | Not applicable                 |

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

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

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### 10.2. Chemical stability

Stable under normal conditions. Not established.

### 10.3. Possibility of hazardous reactions

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

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

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

| CFS-F FX, B / CP 660, B   |   |
|---|---|
| ATE UN (dust,mist)  | 1.5 mg/l/4h   |
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)             |   |
| LD50 oral rat   | > 10000 mg/kg (Rat, Literature study, Oral)   |
| LD50 dermal rabbit  | > 5000 mg/kg (Rabbit, Literature study, Dermal)   |
| LD50 dermal   | 9400 mg/kg  |
| LC50 Inhalation - Rat   | 0.49 mg/l   |
| 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8) |   |
| LD50 oral rat   | > 2000 mg/kg  |
| LD50 oral   | 31600 mg/kg   |
| LD50 dermal rabbit  | > 9400 mg/kg  |
| LC50 Inhalation - Rat (Dust/Mist)   | > 0.368 mg/l/4h   |
| Skin corrosion/irritation   | Causes skin irritation.   |
| Serious eye damage/irritation   | Causes serious eye irritation.  |
| Respiratory or skin sensitisation   | May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. |
| Germ cell mutagenicity  | Not classified  |
| Carcinogenicity   | Suspected of causing cancer.  |
| Reproductive toxicity   | Not classified  |
| STOT-single exposure  | May cause respiratory irritation.   |
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)             |   |
| STOT-single exposure  | May cause respiratory irritation.   |
| 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8) |   |
| STOT-single exposure  | May cause respiratory irritation.   |
| STOT-repeated exposure  | May cause damage to organs through prolonged or repeated exposure.  |

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| 4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)             |  |
|---|--|
| STOT-repeated exposure  | May cause damage to organs through prolonged or repeated exposure. |
| 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8) |  |
| STOT-repeated exposure  | May cause damage to organs through prolonged or repeated exposure. |
| Aspiration hazard   | Not classified   |
| CFS-F FX, B / CP 660, B   |  |
| Viscosity, kinematic  | 299.766 mm <sup>2</sup> /s   |
| Potential adverse human health effects and symptoms                               | Harmful if inhaled.  |

## SECTION 12: Ecological information

### 12.1. Toxicity

|   |   |
|---|---|
| Ecology - general   | The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Hazardous to the aquatic environment, short-term (acute)  | Not classified  |
| Hazardous to the aquatic environment, long-term (chronic) | Not classified  |

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

### 12.2. Persistence and degradability

| CFS-F FX, B / CP 660, B   |                                     |
|---|-------------------------------------|
| Persistence and degradability   | Not established.                    |
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)             |                                     |
| Not rapidly degradable  |                                     |
| Persistence and degradability   | Not readily biodegradable in water. |
| 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8) |                                     |
| Not rapidly degradable  |                                     |

### 12.3. Bioaccumulative potential

| CFS-F FX, B / CP 660, B   |  |
|---|--|
| Bioaccumulative potential   | Not established.   |
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9) |  |
| BCF - Fish [1]  | 268.1 l/kg (BCFBAF v3.01, Estimated value, Fresh weight) |
| Partition coefficient n-octanol/water (Log Kow)                       | 10.46 (Calculated, KOWWIN)                               |
| Bioaccumulative potential   | Low potential for bioaccumulation (BCF < 500).           |

### 12.4. Mobility in soil

| CFS-F FX, B / CP 660, B   |                                     |
|---|-------------------------------------|
| Mobility in soil  | No additional information available |
| 4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9) |                                     |
| Surface tension   | No data available in the literature |

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| 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.  |

### 12.5. Other adverse effects

|                       |                                     |
|-----------------------|-------------------------------------|
| Ozone                 | Not classified                      |
| Other adverse effects | No additional information available |
| Other information     | Avoid release to the environment.   |

## 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 | Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
| Ecological information                     | Avoid release to the environment.   |
| Additional information                     | packaging containing residues of or contaminated by dangerous substances. Dispose in a safe manner in accordance with local/national regulations.   |

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID /

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

### 14.6. Special precautions for user

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

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**Rail transport**  
Not regulated

**14.7. Maritime transport in bulk according to IMO instruments**

Not applicable

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations specific for the product in question**

No additional information available

**SECTION 16: Other information**

|                 |            |
|-----------------|------------|
| SDS Major/Minor | None       |
| Issue date      | 22/11/2024 |
| Revision date   | 22/11/2024 |
| Supersedes      | 17/10/2022 |

| Section | Changed item | Change | Comments       |
|---------|--------------|--------|----------------|
|         |              |        | general update |

Abbreviations and acronyms

- CAS-No. - Chemical Abstract Service number
- ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE - Acute Toxicity Estimate
- BCF - Bioconcentration factor
- BLV - Biological limit value
- BOD - Biochemical oxygen demand (BOD)
- CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
- DMEL - Derived Minimal Effect level
- DNEL - Derived-No Effect Level
- EC-No. - European Community number
- EC50 - Median effective concentration
- ED - Endocrine disrupting properties
- EN - European Standard
- IARC - International Agency for Research on Cancer
- IATA - International Air Transport Association
- IMDG - International Maritime Dangerous Goods
- IOELV - Indicative Occupational Exposure Limit Value
- LC50 - Median lethal concentration
- LD50 - Median lethal dose
- LOAEL - Lowest Observed Adverse Effect Level
- N.O.S. - Not Otherwise Specified
- NOAEC - No-Observed Adverse Effect Concentration
- NOAEL - No-Observed Adverse Effect Level
- NOEC - No-Observed Effect Concentration
- vPvB - Very Persistent and Very Bioaccumulative
- WGK - Water Hazard Class
- VOC - Volatile Organic Compounds
- SDS - Safety Data Sheet
- RID - Regulations concerning the International Carriage of Dangerous Goods by Rail



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REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006  
PNEC - Predicted No-Effect Concentration  
PBT - Persistent Bioaccumulative Toxic  
OEL - Occupational Exposure Limit  
OECD - Organisation for Economic Co-operation and Development  
COD - Chemical oxygen demand (COD)  
ThOD - Theoretical oxygen demand (ThOD)  
TRGS - Technical Rules for Hazardous Substances  
TLM - Median Tolerance Limit  
STP - Sewage treatment plant  
None.

Other information

| Full text of H-statements:         |   |
|------------------------------------|---|
| Acute Tox. 4 (Inhalation)          | Acute toxicity (inhal.), Category 4                                       |
| Acute Tox. Not classified (Dermal) | Acute toxicity (dermal) Not classified                                    |
| Acute Tox. Not classified (Oral)   | Acute toxicity (oral) Not classified                                      |
| Eye Irrit. 2                       | Serious eye damage/eye irritation, Category 2                             |
| Flam. Liq. Not classified          | Flammable liquids Not classified  |
| 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\_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.