

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 Saudi Arabia for Construction Tools LLC
King Fahd Street
P.O. Box 15930
21454 Jeddah - Saudi Arabia
T +966 2 213 8400 - F +966 2 697 4696
sa.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:

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

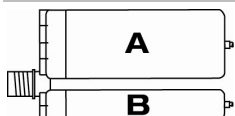
Safety information for 2-Component-products

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 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

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.

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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. 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

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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
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1.4. Supplier's details

Supplier

Hilti Saudi Arabia for Construction Tools LLC
King Fahd Street
P.O. Box 15930
SA 21454 Jeddah
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T +966 2 213 8400, F +966 2 697 4696
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Department issuing data specification sheet

Hilti AG
Feldkircherstraße 100
FL 9494 Schaan
Liechtenstein
T +423 234 2111
product.compliance-fire.protection@hilti.com

1.5. Emergency phone number

Emergency number	Emergency CONTACT (24-Hour-Number): GBK GmbH Global Regulatory Compliance +49 (0)6132-84463 +966 2 213 8400
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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)

Warning

Hazardous ingredients

Ethylenediamine, ethoxylated and propoxylated

Hazard statements (GHS UN)

H317 - May cause an allergic skin reaction

Precautionary statements (GHS UN)

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

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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 Serious eye damage/eye irritation, Category 2A, H319 Hazardous to the aquatic environment – Acute Hazard Not classified 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 Serious eye damage/eye irritation, Category 2A, H319 Skin sensitisation, Category 1, H317 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.
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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.
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5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	Toxic fumes may be released. Carbon monoxide. Carbon dioxide.
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5.3. Special protective actions for fire-fighters

Protection during firefighting	Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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

6.1.2. For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up: Take up liquid spill into absorbent material.
Other information: Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a well-ventilated place. Keep cool.
Storage temperature: 5 – 25 °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)

Personal protective equipment:

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

Hand protection: Wear suitable gloves tested to EN374. Suitable for short-term work or as a splash guard: Nitrile rubber gloves (> 0.1 mm). In case of permanent product contact:

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

Eye protection: Chemical goggles or safety glasses

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)

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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/cm ³
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 pH: Not determined
Serious eye damage/irritation	Not classified pH: Not determined
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
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
14.1. UN number or ID number			
Not applicable	Not applicable	Not applicable	Not applicable
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
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

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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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	11/22/2024
Revision date	11/22/2024
Supersedes	10/17/2022

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

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



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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
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1.4. Supplier's details

Supplier

Hilti Saudi Arabia for Construction Tools LLC
King Fahd Street
P.O. Box 15930
SA 21454 Jeddah
Saudi Arabia
T +966 2 213 8400, F +966 2 697 4696
sa.customerservice@hilti.com

Department issuing data specification sheet

Hilti AG
Feldkircherstraße 100
FL 9494 Schaan
Liechtenstein
T +423 234 2111
product.compliance-fire.protection@hilti.com

1.5. Emergency phone number

Emergency number	Emergency CONTACT (24-Hour-Number): GBK GmbH Global Regulatory Compliance +49 (0)6132-84463 +966 2 213 8400
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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.

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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

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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 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 2, H319 Respiratory sensitisation, Category 1, H334 Skin sensitisation, Category 1, H317 Carcinogenicity, Category 2, H351 Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation, H335 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 Acute toxicity (dermal) Not classified Acute toxicity (inhal.), Category 4, H332 Acute toxicity (inhalation:dust,mist) Category 4, H332 Skin corrosion/irritation, Category 2, H315 Serious eye damage/eye irritation, Category 2, H319 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, Respiratory tract irritation, H335 Specific target organ toxicity – Repeated exposure, Category 2, H373

Full text of H-statements: see section 16

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

Safety Data Sheet

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

Emergency procedures

Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up

Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

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

Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Obtain special instructions before use.

Hygiene measures

Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well ventilated place away from : Keep container tightly closed.

Incompatible products

Strong bases. Strong acids.

Incompatible materials

Sources of ignition. Direct sunlight.

Storage temperature

5 – 25 °C

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.

Other information

Do not eat, drink or smoke during use.

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

Personal protective equipment:

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

Hand protection

Wear suitable gloves tested to EN374. Suitable for short-term work or as a splash guard: Nitrile rubber gloves (> 0.1 mm). In case of permanent product contact:

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

Eye protection

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

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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 mm ² /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.

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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
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Viscosity, kinematic	299.766 mm ² /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
14.1. UN number or ID number			
Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
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	11/22/2024
Revision date	11/22/2024
Supersedes	10/17/2022

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

Other information

None.

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

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