CFS-F FX / CP 660

Safety information for 2-Component-products

Issue date: 03/11/2025 Revision date: 03/11/2025 Supersedes: 22/11/2024 Version: 7.0

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, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
TX 75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522
us-sales@hilti.com

SECTION 2: General information

A SDS for each of these components is included. Please do not separate any component SDS from this cover page

SECTION 3: Kit contents

Classification of the Product

GHS-US classification

Acute Tox. 4 (Inhalation)	H332 - Harmful if inhaled.
Skin Irrit. 2	H315 - Causes skin irritation.
Eye Irrit. 2A	H319 - Causes serious eye irritation.
Resp. Sens. 1	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317 - May cause an allergic skin reaction.
Carc. 2	H351 - Suspected of causing cancer.
STOT SE 3	H335 - May cause respiratory irritation.
STOT RE 2	H373 - May cause damage to organs through prolonged or repeated exposure.

Label elements

GHS US labelling

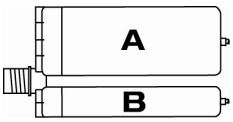
Hazard pictograms (GHS US)

GHS07 GHS08

Signal word (GHS US) Danger

Hazardous ingredients	4,4'-diphenylmethanediisocyanate, isomeres and homologues; Ethylenediamine, ethoxylated and propoxylated
Hazard statements (GHS US)	Causes skin irritation May cause an allergic skin reaction Causes serious eye irritation Harmful if inhaled May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause respiratory irritation Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure
Precautionary statements (GHS US)	Do not breathe vapours. Wear eye protection, protective clothing, protective gloves. Wear respiratory protection. If on skin: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If experiencing respiratory symptoms: Call a poison center or doctor.

Additional information



Name	General description	Quantity	Unit	GHS-US classification
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. 2, 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.
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

CFS-F FX, A / CP 660, A

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date: 11/3/2025 Issue date: 11/3/2025 Supersedes: 11/22/2024 Version: 7.0

SECTION 1: Identification

1.1. Identification

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
Recommended use	Firestop foam

1.4. Supplier's details

Supplier

Hilti, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
US TX 75024 Plano
USA
T +1 9724035800
1-800-879-8000 toll free, F +1 918 254 0522
us-sales@hilti.com

Department issuing data specification sheet

Hilti AG
Feldkircher Strasse 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/Infotrac ID 101022 (USA domestic) 1 800 535 5053 or international (001) 352 323 3500

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin sensitization, Category 1	H317	May cause an allergic skin reaction.

Full text of H-statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US)

Signal word (GHS US)	Warning
Hazard statements (GHS US)	H317 - May cause an allergic skin reaction
Precautionary statements (GHS US)	P280 - Wear eye protection, protective clothing, protective gloves. P302+P352 - If on skin: Wash with plenty of water.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
iron(III) oxide	CAS-No.: 1309-37-1	2.5 – 5	Not classified
Ethylenediamine, propoxylated	CAS-No.: 25214-63-5	2,5 - <5	Eye Irrit. 2A, H319
Ethylenediamine, ethoxylated and propoxylated	CAS-No.: 26316-40-5	2,5 - <5	Eye Irrit. 2A, H319 Skin Sens. 1, H317 Eye Irrit. 2, H319

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

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.

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 and effects (acute and delayed)

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

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) 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 equipment and precautions for fire-fighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

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

For emergency responders

Protective equipment	For further information refer to section 8: "Exposure controls/personal protection". Use personal protective equipment as required.
Environmental precautions	Avoid release to the environment.

6.2. 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.

For further information refer to section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Ensure good ventilation of the work station. 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	41 – 77 °F

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

Ethylenediamine, propoxylated (25214-63-5)	
No additional information available	

Ethylenediamine, ethoxylated and propoxylated (26316-40-5)	
No additional information available	

iron(III) oxide (1309-37-1)	
No additional information available	
USA - ACGIH - Occupational Exposure Limits	
Local name	Iron oxide (Fe2O3)
ACGIH® TLV® TWA	5 mg/m³ (R - Respirable particulate matter)
Remark (ACGIH®)	TLV® Basis: Pneumoconiosis. Notations: A4 (Not classifiable as a Human Carcinogen)

iron(III) oxide (1309-37-1)	
Regulatory reference	ACGIH 2023
USA - OSHA - Occupational Exposure Limits	
Local name	Iron oxide fume
OSHA PEL TWA	10 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

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/Personal protective equipment

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
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	>0,35mm	
Disposable gloves	Butyl rubber	6 (> 480 minutes)	>0,35mm	

Eye protection:

Use eye protection according to EN 166. 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). [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: red

Odour	There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: Odourless Mild odour Characteristic odour odourless Almost odourless
Odour threshold	No data available
pH	Not determined
Melting point	Not applicable
Freezing point	No data available
Boiling point	No data available
Flash point	Not applicable.
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	Not applicable.
Vapour pressure	No data available
Relative vapour density at 20°C	No data available
Relative density	No data available
Density	≈ 1.17 g/cm³
Solubility	No data available
Partition coefficient n-octanol/water (Log Pow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive limits	No data available
Explosive properties	No data available
Oxidising properties	No data available

9.2. Other information

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

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

iron(III) oxide (1309-37-1)	
LD50 oral rat	> 10000 mg/kg bodyweight (Rat, Male, Experimental value, Oral)
LD50 oral	10000 mg/kg
LC50 Inhalation - Rat	5.05 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
LC50 Inhalation - Rat (Dust/Mist)	5.05 mg/l/4h

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

iron(III) oxide (1309-37-1)	
IARC group	3 - Not classifiable

Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
Viscosity, kinematic	No data available
Symptoms/effects after skin contact	May cause an allergic skin reaction.

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.

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

iron(III) oxide (1309-37-1)	
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

iron(III) oxide (1309-37-1)
Not rapidly degradable

iron(III) oxide (1309-37-1)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

iron(III) oxide (1309-37-1)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

iron(III) oxide (1309-37-1)	
Surface tension	Not applicable (solid)
Ecology - soil	Adsorbs into the soil.

12.5. 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 DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. 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

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

No additional information available

15.3. US State regulations

CFS-F FX, A / CP 660, A	
U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

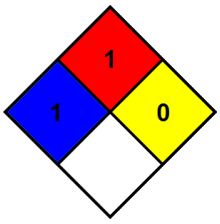
according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Revision date 11/03/2025

Full text of hazard classes and H-statements	
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

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 disruptor
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

Abbreviations and acronyms	
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
ACGIH	American Conference of Government Industrial Hygienists
CSA	Chemical safety assessment
EWC	European waste catalogue
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
OSHA	Occupational Safety Health Administration
PPE	Personal protection equipment
TF	Technical function
TWA	Time Weighted Average
UFI	Unique Formula Identifier

NFPA health hazard	1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	0 - Material that in themselves are normally stable, even under fire conditions.



Indication of changes:			
Section	**Changed item**	**Change**	**Comments**
			general update

CFS-F FX, B / CP 660, B

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date: 11/3/2025 Issue date: 11/3/2025 Supersedes: 11/22/2024 Version: 7.0

SECTION 1: Identification

1.1. Identification

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
Recommended use	Firestop foam

1.4. Supplier's details

Supplier

Hilti, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
US TX 75024 Plano
USA
T +1 9724035800
1-800-879-8000 toll free, F +1 918 254 0522
us-sales@hilti.com

Department issuing data specification sheet

Hilti AG
Feldkircher Strasse 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/Infotrac ID 101022 (USA domestic) 1 800 535 5053 or international (001) 352 323 3500

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity (inhalation:dust,mist), Category 4	H332	Harmful if inhaled.
Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation.
Respiratory sensitization, Category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction.
Carcinogenicity, Category 2	H351	Suspected of causing cancer.
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.
Specific target organ toxicity — Repeated exposure, Category 2	H373	May cause damage to organs through prolonged or repeated exposure.

Full text of H-statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US)

Signal word (GHS US): Danger

Hazard statements (GHS US):
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 US):
P260 - Do not breathe vapours.
P280 - Wear eye protection, protective clothing, protective gloves.
P284 - 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. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
4,4'-diphenylmethanediisocyanate, isomeres and homologues	CAS-No.: 9016-87-9	50 – 100	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373

Name	Product identifier	%	GHS-US classification
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	CAS-No.: 101-68-8	20 – 40	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373

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

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell. 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 and effects (acute and delayed)

Potential adverse human health effects and symptoms: Harmful if inhaled.

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.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) 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 equipment and precautions 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

For non-emergency personnel

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

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.
Emergency procedures	Ventilate area.
Environmental precautions	Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.2. 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.

For further information refer to section 13,See Section 8,Exposure controls and personal protection

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	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	41 – 77 °F

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

CFS-F FX, B / CP 660, B
No additional information available

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
No additional information available	
USA - OSHA - Occupational Exposure Limits	
Local name	Toluene-2, 4-diisocyanate (TDI)
OSHA PEL C	0.14 mg/m³
	0.02 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
No additional information available	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methylene bisphenyl isocyanate (MDI)
ACGIH® TLV® TWA	0.005 ppm
Remark (ACGIH®)	TLV® Basis: Resp sens
Regulatory reference	ACGIH 2023
USA - OSHA - Occupational Exposure Limits	
Local name	Methylene bisphenyl isocyanate (MDI)
OSHA PEL C	0.2 mg/m³
	0.02 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

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/Personal protective equipment

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
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		
Type	**Field of application**	**Characteristics**
Safety glasses	Droplet	

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). [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):

Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	amber
Odour	characteristic
Odour threshold	No data available
pH	No data available
Melting point	Not applicable
Freezing point	No data available
Boiling point	No data available
Flash point	> 200 °C
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	Not applicable. Non flammable.
Vapour pressure	0.1 mbar
Relative vapour density at 20°C	No data available
Relative density	No data available
Density	1.155 kg/l
Solubility	No data available
Partition coefficient n-octanol/water (Log Pow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	299.766 mm²/s
Viscosity, dynamic	346.23 mPa·s
Explosive limits	No data available
Explosive properties	No data available
Oxidising properties	No data available

9.2. Other information

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. 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 US (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.

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
IARC group	3 - Not classifiable

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
IARC group	3 - Not classifiable

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.

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
Viscosity, kinematic	299.766 mm²/s
Potential adverse human health effects and symptoms	Harmful if inhaled.
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.

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.

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 Pow)	10.46 (Calculated, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
Surface tension	No data available in the literature
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

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.

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

Ecological waste information: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. 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

DOT	TDG	IMDG	IATA
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

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

4,4'-diphenylmethanediisocyanate, isomeres and homologues	CAS-No. 9016-87-9	50 – 100%
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	CAS-No. 101-68-8	20 – 40%

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	5000 lb

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

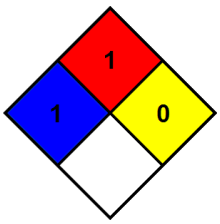
Revision date	11/03/2025
Data sources	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Other information	None.

Full text of hazard classes and H-statements	
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

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 disruptor
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

Abbreviations and acronyms	
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)
TRGS	Technical Rules for Hazardous Substances
TLM	Median Tolerance Limit
STP	Sewage treatment plant
ACGIH	American Conference of Government Industrial Hygienists
CSA	Chemical safety assessment
EWC	European waste catalogue
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
OSHA	Occupational Safety Health Administration
PPE	Personal protection equipment
TF	Technical function
TWA	Time Weighted Average
UFI	Unique Formula Identifier

NFPA health hazard	1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	0 - Material that in themselves are normally stable, even under fire conditions.



Indication of changes:			
Section	**Changed item**	**Change**	**Comments**
			29 CFR § 1910.1200, Hazard Communication Standard (HCS)

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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.