CF 812 WD

Safety Data Sheet

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

Revision date: 10/23/2025 Issue date: 10/23/2025 Supersedes: 8/13/2025 Version: 5.0

SECTION 1: Identification

1.1. Identification

Product form	Mixture
Trade name	CF 812 WD
Product code	BU Fire Protection Foam

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture	:	PU installation foams
Recommended use	:	PU installation foams

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
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/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

Aerosol, Category 1	H222;H229	Extremely flammable aerosol. Pressurized container; may burst if heated.
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):
H222 - Extremely flammable aerosol
H229 - Pressurized container; may burst if heated
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure

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

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	10 – 40	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	10 – 40	Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
Polymethylenepolyphenylisocyanate, proxylated glycerin polymer	CAS-No.: 57029-46-6	10 – 40	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
Reaction products of phosphoryl trichloride and 2-methyloxirane	CAS-No.: 13674-84-5	10 – 25	Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Chronic 3, H412
Dimethyl ether (Propellant gas (Aerosol))	CAS-No.: 115-10-6	5 – 10	Flam. Gas 1, H220 Press. Gas (Comp.), H280
isobutane (Propellant gas (Aerosol))	CAS-No.: 75-28-5	1 – 5	Flam. Gas 1, H220 Press. Gas (Comp.), H280
propane (Propellant gas (Aerosol))	CAS-No.: 74-98-6	1 – 5	Flam. Gas 1, H220 Press. Gas (Liq.), H280
2,2'-methylenediphenyl diisocyanate	CAS-No.: 2536-05-2	0.1 – 1	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373

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

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
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 contaminated clothing before reuse. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	Danger of serious damage to health by prolonged exposure through inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation. Harmful if inhaled.
Symptoms/effects after skin contact	Causes skin irritation. Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	Causes serious eye irritation. Eye irritation.
Symptoms/effects after ingestion	None under normal conditions.

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	Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	Extremely flammable aerosol.
Explosion hazard	Pressurised container: May burst if heated.
Hazardous decomposition products in case of fire	Vapours may form explosive mixture with air.

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. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment	:	Wear recommended personal protective equipment.

Emergency procedures	:	Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Ventilate area. Evacuate unnecessary personnel. Stop leak if safe to do so.
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

For containment	:	Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up	:	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information	:	After curing, the product can be disposed of with household waste. Dispose of materials or solid residues at an authorized site.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. May form flammable/explosive vapour-air mixture. 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.
Hygiene measures	Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. 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	Keep only in the original container in a cool, well ventilated place away from : Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Store in a well-ventilated place.
Incompatible products	Strong bases. Strong acids.
Incompatible materials	Sources of ignition. Direct sunlight.
Storage temperature	5 – 25 °C
Heat and ignition sources	Keep away from heat and direct sunlight. Keep away from ignition sources.
Packaging materials	Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

CF 812 WD	
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

Dimethyl ether (115-10-6)	
No additional information available	

isobutane (75-28-5)	
No additional information available	
USA - ACGIH - Occupational Exposure Limits	
Local name	Isobutane
ACGIH® TLV® STEL	2370 mg/m³ (EX - Explosion hazard)
	1000 ppm (EX - Explosion hazard)
Remark (ACGIH®)	TLV® Basis: CNS impair
Regulatory reference	ACGIH 2023

propane (74-98-6)	
No additional information available	
USA - ACGIH - Occupational Exposure Limits	
Local name	Propane
Remark (ACGIH®)	TLV® Basis: Simple Asphyxiant
Regulatory reference	ACGIH 2023
USA - OSHA - Occupational Exposure Limits	
Local name	Propane
OSHA PEL TWA	1800 mg/m³
	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Reaction products of phosphoryl trichloride and 2-methyloxirane (13674-84-5)
No additional information available

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)
No additional information available

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
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

Polymethylenepolyphenylisocyanate, proxylated glycerin polymer (57029-46-6)
No additional information available

2,2'-methylenediphenyl diisocyanate (2536-05-2)
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/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):

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
Appearance	Aerosol.
Colour	Beige
Odour	slight ether-like odour
Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	< -42 °C
Flash point	-104 °C
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	Extremely flammable aerosol.
Vapour pressure	0.5 mPa mm hg (20°C/68°F)
Relative vapour density at 20°C	No data available
Relative density	No data available
Density	1 g/cm³
Relative gas density	1.7
Solubility	Not soluble in water alone.
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	Lower explosion limit: 0.4 vol % Upper explosion limit: 32 vol %
Explosive properties	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Oxidising properties	No data available

9.2. Other information

Heat of combustion	20 – 30 kJ/g NFPA 30B, Aerosol Classification Level: 2

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

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)	Not classified.

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
LD50 oral rat	> 10000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Literature study, Dermal)
LD50 dermal	9400 mg/kg
LC50 Inhalation - Rat	0.49 mg/l

isobutane (75-28-5)	
LC50 Inhalation - Rat [ppm]	> 800000 ppm (15 minutes, Rat, Male / female, Experimental value, Inhalation (gases))

propane (74-98-6)	
LC50 Inhalation - Rat [ppm]	> 800000 ppm (15 minutes, Rat, Male / female, Experimental value, Inhalation (gases))

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

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
LD50 oral rat	> 5000 mg/kg bodyweight (Rat, Read-across, Oral, 15 day(s))
LD50 dermal rabbit	> 9400 mg/kg bodyweight (24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s))
LC50 Inhalation - Rat	0.53 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male, Experimental value, Inhalation (dust))

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.

Polymethylenepolyphenylisocyanate, proxylated glycerin polymer (57029-46-6)	
STOT-single exposure	May cause respiratory irritation.

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
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.

Polymethylenepolyphenylisocyanate, proxylated glycerin polymer (57029-46-6)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard	Not classified
Viscosity, kinematic	No data available
Symptoms/effects after inhalation	Danger of serious damage to health by prolonged exposure through inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause respiratory irritation. Harmful if inhaled.
Symptoms/effects after skin contact	Causes skin irritation. Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	Causes serious eye irritation. Eye irritation.
Symptoms/effects after ingestion	None under normal conditions.

SECTION 12: Ecological information

12.1. Toxicity

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

Dimethyl ether (115-10-6)	
LC50 - Fish [1]	> 4100 mg/l (NEN 6504: Water - Determination of toxicity with Poecilia reticulata, 96 h, Poecilia reticulata, Semi-static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	> 4400 mg/l (NEN 6501: Water - Determination of toxicity with Daphnia magna, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Lethal)
EC50 96h - Algae [1]	154.9 mg/l (ECOSAR v1.00, Algae, QSAR, Estimated value)

isobutane (75-28-5)	
EC50 96h - Algae [1]	8.57 mg/l (ECOSAR v1.00, Algae, Fresh water, QSAR)

propane (74-98-6)	
EC50 96h - Algae [1]	12 mg/l (ECOSAR v1.00, Algae, Fresh water, QSAR)

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
LC50 - Fish [1]	> 100 mg/l (96 h, Pisces, Fresh water, Read-across)
EC50 72h - Algae [1]	100 mg/l (Algae, Fresh water, Read-across)

12.2. Persistence and degradability

4,4'-diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
Not rapidly degradable	
Persistence and degradability	Not readily biodegradable in water.

Dimethyl ether (115-10-6)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.

isobutane (75-28-5)	
Not rapidly degradable	
Persistence and degradability	Readily biodegradable in water.

propane (74-98-6)	
Not rapidly degradable	
Persistence and degradability	Readily biodegradable in water.

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)
Not rapidly degradable

2,2'-methylenediphenyl diisocyanate (2536-05-2)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

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).

Dimethyl ether (115-10-6)	
Partition coefficient n-octanol/water (Log Pow)	0.1 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
isobutane (75-28-5)	
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
propane (74-98-6)	
Partition coefficient n-octanol/water (Log Pow)	1.1 – 2.8 (Experimental value, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
2,2'-methylenediphenyl diisocyanate (2536-05-2)	
BCF - Fish [1]	92 – 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across)
Partition coefficient n-octanol/water (Log Pow)	5.22 (QSAR, 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.
Dimethyl ether (115-10-6)	
Surface tension	No data available in the literature
Ecology - soil	Not applicable (gas).
isobutane (75-28-5)	
Surface tension	No data available in the literature
Ecology - soil	Not applicable (gas).
propane (74-98-6)	
Surface tension	No data available in the literature
Ecology - soil	Not applicable (gas).
2,2'-methylenediphenyl diisocyanate (2536-05-2)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.5 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	Disposal must be done according to official regulations.
Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	Disposal must be done according to official regulations.
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. Disposal must be done according to official regulations.
Additional information	Do not re-use empty containers.
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			
1950	UN1950	1950	1950
14.2. Proper Shipping Name			
Aerosols	AEROSOLS	AEROSOLS	Aerosols, flammable
14.3. Transport hazard class(es)			
2.1	2.1	2.1	2.1
			
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	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

DOT

UN-No. (DOT)	:	UN1950
DOT Special Provisions (49 CFR 172.102)	:	N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	306
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	150 kg

DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	:	25 - Protected from sources of heat,87 - Stow ‘‘separated from’’ Class 1 (explosives) except Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials

TDG

UN-No. (TDG)	:	UN1950
TDG Special Provisions	:	80 - Despite section 1.17 of Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases), a person must not offer for transport or transport these dangerous goods unless they are in a means of containment that is in compliance with the requirements for transporting gases in Part 5 (Means of Containment),107 - (1) These Regulations, except for Parts 1 and 2, do not apply to the offering for transport, handling or transport of UN1950, AEROSOLS, and UN2037, GAS CARTRIDGES, that contain dangerous goods included in Class 2.1 or Class 2.2 and that are transported on a road vehicle, a railway vehicle or a vessel on a domestic voyage, if the aerosols or gas cartridges have a capacity less than or equal to 50 mL. (2) Subsection (1) does not apply to self-defence spray.
Explosive Limit and Limited Quantity Index	:	1 L
Excepted quantities (TDG)	:	E0
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	:	75 L
Emergency Response Guide (ERG) Number	:	126

IMDG

Special provisions (IMDG)	:	63, 190, 277, 327, 344, 959
Limited quantities (IMDG)	:	SP277
Packing instructions (IMDG)	:	P207, LP02
EmS-No. (Fire)	:	F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES
EmS-No. (Spillage)	:	S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE)
Stowage category (IMDG)	:	None
MFAG-No	:	126

IATA

PCA packing instructions (IATA)	:	203
PCA max net quantity (IATA)	:	75kg
CAO packing instructions (IATA)	:	203
Special provisions (IATA)	:	A145, A167, A802

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	10 – 40%

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	CAS-No. 101-68-8	10 – 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 10/23/2025

Full text of hazard classes and H-statements	
H220	Extremely flammable gas
H222	Extremely flammable aerosol
H229	Pressurized container; may burst if heated
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

Indication of changes:			
Section	**Changed item**	**Change**	**Comments**
		Modified	Revision 7 of the UN GHS

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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.