SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Mixture
Trade name	:	PU FS
UFI	:	YQX0-90KF-100U-QG1P
Article number	:	00042757
Vaporizer	:	Aerosol

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Intended for general public

Main use category	:	Building and construction work
Industrial/Professional use spec	:	As from 24 August 2023 adequate training is required before industrial or professional use
Use of the substance/mixture	:	Polyurethane, polyurethane foam

1.3. Details of the supplier of the safety data sheet

Manufacturer
fischerwerke GmbH & Co. KG
Klaus-Fischer-Straße 1
72178 Waldachtal
Germany
T +49(0)7443 12-0, F +49(0)7443 12-4222
info-sdb@fischer.de, www.fischer.de

Distributor
fischer fixings UK Ltd.
Whitely Road
Oxon OX10 9AT Wallingford
United Kingdom of Great Britain and Northern Ireland
T +44 14 91 82 79 00, F +44 14 91 82 79 53
info@fischer.co.uk, www.fischer.co.uk

1.4. Emergency telephone number

Emergency number	:	+49(0)6132-84463 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aerosol 1	H222;H229
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, H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Pressurised container: May burst if heated. Extremely flammable aerosol. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Harmful if inhaled. 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.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS07 GHS08

Signal word (CLP)	:	Danger
Contains	:	Isocyanic acid, polymethylenepolyphenylene ester; Reaction products of phosphoryl trichloride and 2-methyloxirane
Hazard statements (CLP)	:	H222 - Extremely flammable aerosol. H229 - Pressurised container: May burst if heated.

		H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. 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 (CLP)	:	P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P260 - Do not breathe dust, fume, gas, mist, vapours, spray. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear eye protection, protective gloves, protective clothing. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - IF exposed or concerned: Get medical advice/attention. P501 - Dispose of contents/container to Collection point.
EUH-statements	:	EUH204 - Contains isocyanates. May produce an allergic reaction.
Extra phrases	:	Without adequate ventilation formation of explosive mixtures may be possible. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material. Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used. As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Isocyanic acid, polymethylenepolyphenylene ester substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 9016-87-9 EC-No.: 618-498-9	≥ 30 – < 60	Acute Tox. 4 (Inhalation:vapour), H332 (ATE=1.5 mg/l/4h) 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 EUH204
Reaction products of phosphoryl trichloride and 2-methyloxirane	CAS-No.: 1244733-77-4 EC-No.: 807-935-0 REACH-no: 01-2119486772-26	< 20	Acute Tox. 4 (Oral), H302 (ATE=632 mg/kg) Carc. 2, H351 Aquatic Chronic 3, H412
propane (Note U)	CAS-No.: 74-98-6 EC-No.: 200-827-9 EC Index-No.: 601-003-00-5 REACH-no: 01-2119486944-21	< 15	Flam. Gas 1, H220 Press. Gas (Comp.), H280
butane (Note C)(Note U)	CAS-No.: 106-97-8 EC-No.: 203-448-7 EC Index-No.: 601-004-00-0 REACH-no: 01-2119752523-40	< 15	Flam. Gas 1, H220 Press. Gas (Comp.), H280

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
isobutane (Note C)(Note U)	CAS-No.: 75-28-5 EC-No.: 200-857-2 EC Index-No.: 601-004-00-0 REACH-no: 01-2119485395-27	< 15	Flam. Gas 1, H220 Press. Gas (Comp.), H280
dimethyl ether substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit (Note U)	CAS-No.: 115-10-6 EC-No.: 204-065-8 EC Index-No.: 603-019-00-8 REACH-no: 01-2119472128-37	< 10	Flam. Gas 1, H220 Press. Gas (Liq.), H280

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Isocyanic acid, polymethylenepolyphenylene ester	CAS-No.: 9016-87-9 EC-No.: 618-498-9	(0.1 ≤ C ≤ 100) Resp. Sens. 1; H334 (5 ≤ C ≤ 100) STOT SE 3; H335 (5 ≤ C ≤ 100) Skin Irrit. 2; H315 (5 ≤ C ≤ 100) Eye Irrit. 2; H319

Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note U: When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:. Press. Gas (Comp.), Press. Gas (Liq.), Press. Gas (Ref. Liq.), Press. Gas (Diss.). Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).

Product subject to CLP Annex I, item 1.1.3.7. The disclosure rules of the components is modified in this case.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Take off immediately all contaminated clothing. 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 skin with plenty of water and soap. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Wash out mouth with water and afterwards drink plenty of water. Do NOT induce vomiting. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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

Symptoms/effects after eye contact : Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Carbon dioxide. Alcohol-resistant foam.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol. Keep away from sources of ignition.

Explosion hazard : Pressurised container: May burst if heated.

Reactivity in case of fire : May cause sensitization by inhalation and skin contact.

Hazardous decomposition products in case of fire	:	Toxic fumes may be released. Combustion products may include the following: carbon oxides (CO, CO2) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO_2 etc.).

5.3. Advice for firefighters

Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	:	Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures	:	Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Evacuate unnecessary personnel. Shelter from vapours by keeping upwind. Take precautionary measures against static discharge.

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".

6.2. Environmental precautions

Avoid release to the environment. Do not allow product to reach the sewage system.

6.3. Methods and material for containment and cleaning up

For containment	:	Stop leak without risks if possible. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Reduce vapour with vapour-suppression foam.
Methods for cleaning up	:	Mechanically recover the product. Notify authorities if product enters sewers or public waters. Take precautionary measures against static discharge. Take up liquid spill into inert absorbent material.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13. See Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
Hygiene measures	:	Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wear suitable protective clothing and eye/face protection.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Keep away from combustible materials. Observe local regulations. Keep out of reach of children. Product must only be kept in the original packaging. Protect from moisture.
Storage temperature	:	> 5 – ≤ 25 °C

7.3. Specific end use(s)

PU installation foams. Building and construction work.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Methylisocyanate
IOEL STEL	0.02 ppm
Regulatory reference	COMMISSION DIRECTIVE 2009/161/EU
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Diisocyanates (measured as NCO)
BOEL TWA	10 µg/m³ (Limit value until 31 December 2028) 6 µg/m³
BOEL STEL	20 µg/m³ (Limit value until 31 December 2028) 12 µg/m³
Regulatory reference	DIRECTIVE (EU) 2024/869 (amending Directive 2004/37/EC)
United Kingdom - Occupational Exposure Limits	
Local name	Isocyanates
WEL TWA (OEL TWA)	0.02 mg/m³ all (as –NCO) Except methyl isocyanate
WEL STEL (OEL STEL)	0.07 mg/m³ all (as –NCO) Except methyl isocyanate
Remark	Sen (Capable of causing occupational asthma)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
United Kingdom - Biological limit values	
Local name	Isocyanates (applies to HDI, IPDI, TDI and MDI)
BMGV	1 µmol/mol creatinine Parameter: isocyanate-derived diamine - Medium: urine - Sampling time: At the end of the period of exposure
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

dimethyl ether (115-10-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Dimethylether
IOEL TWA	1920 mg/m³
	1000 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom - Occupational Exposure Limits	
Local name	Dimethyl ether
WEL TWA (OEL TWA)	766 mg/m³
	400 ppm
WEL STEL (OEL STEL)	958 mg/m³
	500 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

butane (106-97-8)	
United Kingdom - Occupational Exposure Limits	
Local name	Butane
WEL TWA (OEL TWA)	1450 mg/m³
	600 ppm
WEL STEL (OEL STEL)	1810 mg/m³
	750 ppm
Remark	Carc (Capable of causing cancer and/or heritable genetic damage, only applies if Butane contains more than 0.1% of buta-1,3-diene)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

DNEL and PNEC

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	0.1 mg/m³
Long-term - systemic effects, inhalation	0.05 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	0.05 mg/m³
Long-term - systemic effects, inhalation	0.025 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	1 mg/l
PNEC aqua (marine water)	0.1 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l
PNEC (STP)	
PNEC sewage treatment plant	1 mg/l

dimethyl ether (115-10-6)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	1894 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects, inhalation	471 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	0.155 mg/l
PNEC aqua (marine water)	0.016 mg/l
PNEC aqua (intermittent, freshwater)	1549 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.681 mg/kg dwt
PNEC sediment (marine water)	0.069 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.045 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	160 mg/l

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	22.6 mg/m³
Long-term - systemic effects, dermal	2.91 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	8.2 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	5.6 mg/m³
Acute - systemic effects, oral	2 mg/kg bodyweight/day
Long-term - systemic effects,oral	0.52 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.45 mg/m³
Long-term - systemic effects, dermal	1.04 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.32 mg/l
PNEC aqua (marine water)	0.032 mg/l

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
PNEC aqua (intermittent, freshwater)	0.51 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	11.5 mg/kg dwt
PNEC sediment (marine water)	1.15 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.34 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	11.6 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	19.1 mg/l

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Safety glasses

Eye protection			
Type	**Field of application**	**Characteristics**	**Standard**
Safety glasses, Protective goggles			EN 166

Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves

Hand protection					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Disposable gloves	LLDPE	1 (> 10 minutes)	0,02		EN 374-3, EN 374-2
Disposable gloves	Butyl rubber	3 (> 60 minutes)	> 0,4		EN 374-2, EN 374-3
Disposable gloves	Nitrile rubber (NBR)	3 (> 60 minutes)	> 0,4		EN 374-2, EN 374-3

Respiratory protection

Respiratory protection:
In the event of insufficient ventilation: Use self-contained breathing apparatus

Respiratory protection			
Device	**Filter type**	**Condition**	**Standard**
	Type A - High-boiling (>65 °C) organic compounds		EN 140

Respiratory protection			
Device	**Filter type**	**Condition**	**Standard**
	Filter AX (brown)		EN 14387

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Various colours.
Appearance	:	Aerosol.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Aerosol Not applicable
Flammability	:	Not available
Explosive properties	:	Heating may cause an explosion.
Lower explosion limit	:	1.5 Vol-%
Upper explosion limit	:	11 Vol-%
Flash point	:	< 0 °C Blowing agent
Auto-ignition temperature	:	> 350 °C Blowing agent
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	Not available
Solubility	:	insoluble in water. Reacts with water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	> 500 kPa
Vapour pressure at 50°C	:	Not available
Density	:	≤ 1.3 g/cm³ (20 °C, PMDI)
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

Information with regard to physical hazard classes

% of flammable ingredients	:	55 %

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong acids. Oxidizing agent. Strong bases. Water. alcohols. Amines.

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 hazard classes as defined in Regulation (EC) No 1272/2008

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

PU FS	
ATE CLP (dust,mist)	2.5 mg/l/4h

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
LD50 oral rat	> 10000 mg/kg (OECD 401 method)
LD50 dermal rabbit	> 9400 mg/kg (OECD 402 method)
LC50 Inhalation - Rat	1.5 mg/l
LC50 Inhalation - Rat (Vapours)	(OECD 403 method)

dimethyl ether (115-10-6)	
LC50 Inhalation - Rat [ppm]	164000 ppm

propane (74-98-6)	
LC50 Inhalation - Rat [ppm]	800000 ppm

isobutane (75-28-5)	
LC50 Inhalation - Rat	1443 mg/l

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
LD50 oral rat	632 mg/kg
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)
LC50 Inhalation - Rat	> 7 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.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
IARC group	3 - Not classifiable

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
NOAEL (chronic, oral, animal/male, 2 years)	329 mg/kg bodyweight

Reproductive toxicity : Not classified

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
LOAEL (animal/female, F0/P)	≈ 99 mg/kg bodyweight
NOAEL (animal/male, F0/P)	≈ 85 mg/kg bodyweight

STOT-single exposure : May cause respiratory irritation.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

isobutane (75-28-5)	
NOAEL (oral, rat, 90 days)	250 mg/kg bodyweight

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
NOAEL (oral, rat, 28 days)	100 mg/kg bodyweight/day

Aspiration hazard : Not classified

PU FS	
Vaporizer	Aerosol
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Viscosity, kinematic	> 161.551 mm²/s
isobutane (75-28-5)	
Viscosity, kinematic	0 mm²/s
Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
Viscosity, kinematic	20 °C

11.2. Information on other hazards

No additional information available

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

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
LC50 - Fish [1]	> 1000 mg/l Brachydanio rerio (zebra-fish)
EC50 - Crustacea [1]	> 1000 mg/l Daphnia magna (Water flea)
ErC50 algae	> 1640 mg/l Scenedesmus subspicatus
NOEC chronic crustacea	> 10 mg/l Daphnia magna (Water flea)
dimethyl ether (115-10-6)	
LC50 - Fish [1]	> 4.1 g/l Poecilia reticulata (Guppy)
EC50 - Crustacea [1]	> 4.4 g/l Daphnia magna (Water flea)
EC50 72h - Algae [1]	154.9 mg/l
propane (74-98-6)	
LC50 - Fish [1]	> 100 mg/l
isobutane (75-28-5)	
LC50 - Fish [1]	312.69 mg/l Brachydanio rerio (zebra-fish)
LC50 - Fish [2]	447000 mg/l
EC50 - Crustacea [1]	7417 mg/l Daphnia magna (Water flea)
EC50 72h - Algae [1]	3855891 mg/l Desmodesmus subspicatus
EC50 96h - Algae [1]	25761.03 mg/l
Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
LC50 - Fish [1]	51 mg/l Pimephales promelas
EC50 - Crustacea [1]	131 mg/l Daphnia magna (Water flea)
EC50 72h - Algae [1]	82 mg/l Pseudokirchneriella subcapitata
NOEC (chronic)	32 mg/l Daphnia magna (Water flea)

12.2. Persistence and degradability

PU FS	
Persistence and degradability	Not rapidly degradable
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Persistence and degradability	Not rapidly degradable

dimethyl ether (115-10-6)	
Persistence and degradability	Not rapidly degradable
propane (74-98-6)	
Persistence and degradability	Rapidly degradable
butane (106-97-8)	
Persistence and degradability	Not rapidly degradable
isobutane (75-28-5)	
Persistence and degradability	Not rapidly degradable
Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Bioconcentration factor (BCF REACH)	200 Cyprinus carpio (Common carp)
Partition coefficient n-octanol/water (Log Pow)	10.46
dimethyl ether (115-10-6)	
Partition coefficient n-octanol/water (Log Pow)	0.1 (25 °C)
propane (74-98-6)	
Partition coefficient n-octanol/water (Log Pow)	2.36
butane (106-97-8)	
Partition coefficient n-octanol/water (Log Pow)	2.31
isobutane (75-28-5)	
Partition coefficient n-octanol/water (Log Pow)	2.76
Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
Bioconcentration factor (BCF REACH)	2.68

12.4. Mobility in soil

dimethyl ether (115-10-6)	
Mobility in soil	27

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment 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.
Product/Packaging disposal recommendations : Discharging into rivers and drains is forbidden.
Additional information : EWC codes listed are intended as a recommendation for users. Special waste.

European List of Waste (LoW, EC 2000/532) : 08 05 01* - waste isocyanates
16 05 04* - gases in pressure containers (including halons) containing dangerous substances
17 06 04 - insulation materials other than those mentioned in 17 06 01 and 17 06 03

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
UN 1950	UN 1950	UN 1950
14.2. UN proper shipping name		
AEROSOLS	AEROSOLS	Aerosols, flammable
Transport document description		
UN 1950 AEROSOLS, 2.1, (D)	UN 1950 AEROSOLS, 2.1	UN 1950 Aerosols, flammable, 2.1
14.3. Transport hazard class(es)		
2.1	2.1	2.1
		
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-D EmS-No. (Spillage): S-U	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

Overland transport

Classification code (ADR) : 5F
Special provisions (ADR) : 190, 327, 344, 625
Limited quantities (ADR) : 1l
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P207, LP200
Special packing provisions (ADR) : PP87, RR6, L2
Mixed packing provisions (ADR) : MP9
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V14
Tunnel restriction code (ADR) : D

Transport by sea

Special provisions (IMDG) : 63, 190, 277, 327, 344, 381, 959
Packing instructions (IMDG) : P207, LP200
Special packing provisions (IMDG) : PP87, L2

Air transport

PCA packing instructions (IATA) : 203
PCA max net quantity (IATA) : 75kg
CAO packing instructions (IATA) : 203
CAO max net quantity (IATA) : 150kg
Special provisions (IATA) : A145, A167, A802
ERG code (IATA) : 10L

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
74.	PU FS	Diisocyanates, O = C=N-R-N = C=O, with R an aliphatic or aromatic hydrocarbon unit of unspecified length
56.	PU FS	Methylenediphenyl diisocyanate (MDI)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Seveso Directive (Disaster Risk Reduction)

Seveso Additional information : FLAMMABLE AEROSOLS
'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids Category 1

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
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)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level

Abbreviations and acronyms:	
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstracts Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aerosol 1	Aerosol, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1	Flammable gases, Category 1
Press. Gas (Comp.)	Gases under pressure : Compressed gas
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2

Full text of H- and EUH-statements:	
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
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.
EUH204	Contains isocyanates. May produce an allergic reaction.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Aerosol 1	H222;H229	On basis of test data
Acute Tox. 4 (Inhalation:dust,mist)	H332	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Resp. Sens. 1	H334	Calculation method
Skin Sens. 1	H317	Calculation method
Carc. 2	H351	Calculation method
STOT SE 3	H335	Calculation method
STOT RE 2	H373	Calculation method

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.