FIREFOAM 1C

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 26/02/2026 Revision date: 26/02/2026 Version: 1.00

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

1.1. Product identifier

Product form : Mixture
Trade name : FIREFOAM 1C
UFI : XC30-W0PY-J00K-MH1Y
Vaporizer : Aerosol

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

1.2.1. Relevant identified uses

Main use category : Industrial use
Use of the substance/mixture : Measures against fire
production of polyurethanes

1.2.2. Uses advised against

Restrictions on use : For professional use only

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier
KuhnOdice Germany GmbH
Glüsinger Straße 86
DE 21217 Seevetal
Germany
T +49 2753 5945-0

Email competent person
sds@kft.de

1.4. Emergency telephone number

Emergency number : +353 1 443 4289 (+61 3 9573 3188) (24 h/365 d)

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Aerosol, Category 1	H222;H229
Acute toxicity (oral), Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Respiratory sensitisation, Category 1	H334
Skin sensitisation, Category 1	H317
Carcinogenicity, Category 2	H351
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335
Specific target organ toxicity – Repeated exposure, Category 2	H373

Full text of 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 (respiratory system) through prolonged or repeated exposure (if inhaled). Harmful if inhaled. Harmful if swallowed. May cause an allergic skin reaction. Causes skin irritation. Causes serious eye irritation. May cause respiratory 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 : Reaction products of phosphoryl trichloride and 2-methyloxirane; diphenylmethanediisocyanate, isomeres and homologues

Hazard statements (CLP) : H222 - Extremely flammable aerosol.
H229 - Pressurised container: May burst if heated.
H302+H332 - Harmful if swallowed or if inhaled.
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 (respiratory system) through prolonged or repeated exposure (if inhaled).

Precautionary statements (CLP) : 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.
P261 - Avoid breathing mist, vapours, spray.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

EUH-statements : EUH204 - Contains isocyanates. May produce an allergic reaction.

Extra phrases : For professional users only.
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

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4), dimethyl ether (115-10-6), isobutane (75-28-5), propane (74-98-6), diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4), dimethyl ether (115-10-6), isobutane (75-28-5), propane (74-98-6), diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)

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 %.

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is 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	diphenylmethanediisocyanate, isomeres and homologues (9016-87-9), Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4), dimethyl ether (115-10-6), isobutane (75-28-5), propane (74-98-6)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	**Product identifier**	**%**	**Classification according to Regulation (EC) No. 1272/2008 [CLP]**
diphenylmethanediisocyanate, isomeres and homologues	CAS-No.: 9016-87-9	≥ 25 – < 50	Acute Tox. 4 (Inhalation:dust,mist), 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
Reaction products of phosphoryl trichloride and 2-methyloxirane	CAS-No.: 1244733-77-4 EC-No.: 807-935-0 REACH-no: 01-2119486772-26-xxx	≥ 20 – < 25	Acute Tox. 4 (Oral), H302 (ATE=632 mg/kg bodyweight) Carc. 2, H351 Aquatic Chronic 3, H412
dimethyl ether (Propellant gas (Aerosol)) substance with national workplace exposure limit(s) (IE); 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-xxxx	≥ 20 – < 25	Flam. Gas 1A, H220 Press. Gas (Liq.), H280
isobutane (Propellant gas (Aerosol)) substance with national workplace exposure limit(s) (IE) (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-xxxx	≥ 5 – < 10	Flam. Gas 1A, H220 Press. Gas (Liq.), H280
propane (Propellant gas (Aerosol)) substance with national workplace exposure limit(s) (IE) (Note U)	CAS-No.: 74-98-6 EC-No.: 200-827-9 EC Index-No.: 601-003-00-5 REACH-no: 01-2119486944-21-xxxx	≥ 2.5 – < 5	Flam. Gas 1A, H220 Press. Gas (Liq.), H280 STOT SE 3, H336

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits (%)**
diphenylmethanediisocyanate, isomeres and homologues	CAS-No.: 9016-87-9	(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 : IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.

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 : 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 : Rinse mouth. Call a poison center or a doctor if you feel unwell.

Self protection of the first-aider : First-aiders should pay attention to their own protection and use the recommended personal protective equipment (see section 8).

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 : May cause an allergic skin reaction. Irritation.

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 : Use extinguishing media appropriate for surrounding fire. Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol.

Explosion hazard : Pressurised container: May burst if heated.

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon monoxide. Carbon dioxide. Nitrogen oxides.

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 run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe mist, vapours, spray. Avoid contact with skin and eyes.

6.1.2. 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 sub-soil penetration. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Notify authorities if product enters sewers or public waters.

Other information : Disposal must be done according to official regulations.

6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. 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. Wear personal protective equipment. 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. Do not breathe mist, vapours, spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

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

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store locked up. Keep container tightly closed.

Maximum storage period : 1 year

Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

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
Ireland - Occupational Exposure Limits	
Local name	Dimethyl ether
OEL TWA	1920 mg/m³
	1000 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024

isobutane (75-28-5)	
Ireland - Occupational Exposure Limits	
Local name	Butane, all isomers: Isobutane
OEL STEL	1000 ppm
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024

propane (74-98-6)	
Ireland - Occupational Exposure Limits	
Local name	Aliphatic hydrocarbon gases Alkanes (C1-C3): Propane
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values), Asphx. (Gaseous chemical substances which may not produce significant physiological effects in the exposed employee, but when present in high concentrations will act as simple asphyxiants)
Regulatory reference	Chemical Agents Code of Practice 2024
Ireland - Biological limit values	
Local name	2-Propanol
BMGV	40 mg/l Parameter: acetone - Medium: urine - Sampling time: End of shift at end of workweek - Notations: B (Background), Ns (Non-specific)
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

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
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
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

dimethyl ether (115-10-6)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	1894 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects, dermal	471 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.155 mg/l
PNEC aqua (marine water)	0.016 mg/l
PNEC aqua (intermittent, freshwater)	1.549 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

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

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

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:
Wear closed safety glasses. ISO 16321-1

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing. EN ISO 13688. EN 13034

Hand protection:
Chemically resistant protective gloves. ISO 374-1. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

Hand protection					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Chemically resistant protective gloves	Nitrile rubber	6 (> 480 minutes)	≥ 0,35	No additional information available	EN ISO 374-1
Chemically resistant protective gloves	Neoprene rubber (HNBR)	6 (> 480 minutes)	≥ 0,5	No additional information available	EN ISO 374-1

8.2.2.3. Respiratory protection

Respiratory protection:
Wear respiratory protection. EN 143. Breathing apparatus with filter. Filter: A-P3. . Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

Other information:
Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Always wash hands after handling the product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	pink. red.
Appearance	:	Aerosol.
Odour	:	Not available
Odour threshold	:	Not available
Melting point	:	Not applicable

Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Extremely flammable aerosol.
Explosive properties	:	Pressurised container: May burst if heated.
Oxidising properties	:	Non oxidizing.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not applicable
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	Not available
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	1041 kg/m³ (20 °C)
Relative density	:	1.041 (20 °C)
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

% of flammable ingredients	:	≈ 18 %

9.2.2. Other safety characteristics

VOC content	:	18.5 % (192,6 g/l)

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

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

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Inhalation:dust,mist: Harmful if inhaled.

FIREFOAM 1C	
ATE CLP (oral)	1531 mg/kg bodyweight
ATE CLP (dust,mist)	3.425 mg/l/4h

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
LD50 oral rat	≈ 632 mg/kg bodyweight (Classification according to Directive 67/548/EEC)
LD50 dermal	> 2000 mg/kg bodyweight (OECD 402 method) (Test method EU B.3)
LC50 Inhalation - Rat (Vapours)	> 7 mg/l/4h (OECD 403 method) (OECD 433 method)

diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
LD50 oral rat	> 2000 mg/kg bodyweight ((OECD 401 method); Neither mortality nor clinical signs of toxicity were observed with the given dose)
LD50 dermal rabbit	> 9400 mg/kg bodyweight (OECD 402 method)
ATE CLP (dust,mist)	1.5 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 (Based on available data, the classification criteria are not met)

Carcinogenicity : Suspected of causing cancer.

diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
NOAEL (chronic, oral, animal/male, 2 years)	1 mg/kg bodyweight/day (OECD 453 method)
NOAEL (chronic, oral, animal/female, 2 years)	1 mg/kg bodyweight/day (OECD 453 method)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : May cause respiratory irritation.

diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs (respiratory system) through prolonged or repeated exposure (if inhaled).

diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
STOT-repeated exposure	May cause damage to organs (respiratory system) through prolonged or repeated exposure (if inhaled).

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

FIREFOAM 1C	
Vaporizer	Aerosol

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : Reaction products of phosphoryl trichloride and 2-methyloxirane: EU - Endocrine disruptor assessment list (ED HH)

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met)

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
LC50 - Fish [1]	51 mg/l (96 h; Pimephales promelas)
EC50 - Crustacea [1]	131 mg/l (48 h; Daphnia magna (Water flea))
ErC50 algae	82 mg/l (72 h; Pseudokirchneriella subcapitata ; (OECD 201 method))
NOEC chronic crustacea	32 mg/l (21 d; Daphnia magna (Water flea) ; (OECD 202 method))
NOEC chronic algae	42 mg/l (72 h; Pseudokirchneriella subcapitata ; (OECD 201 method))

12.2. Persistence and degradability

FIREFOAM 1C	
Persistence and degradability	Not readily biodegradable.

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	14 % (28 d ; (OECD 301E method))

diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
Persistence and degradability	The product is not biodegradable.
Biodegradation	0 % (28 d; (OECD 302C method))

12.3. Bioaccumulative potential

FIREFOAM 1C	
Bioaccumulative potential	The product has not been tested.

Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4)	
Bioaccumulative potential	Bioaccumulation unlikely.

isobutane (75-28-5)	
Partition coefficient n-octanol/water (Log Pow)	1.09 – 2.8 (20 °C; pH 7)

diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
Bioconcentration factor (BCF REACH)	200 (28 d; Cyprinus carpio; (OECD 305 method))
Partition coefficient n-octanol/water (Log Pow)	4.51 (20 °C; (OECD 117 method))
Bioaccumulative potential	Bioaccumulation unlikely.

12.4. Mobility in soil

FIREFOAM 1C	
Mobility in soil	The product has not been tested

diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.5 (20 °C)

Ecology - soil	No data available.

12.5. Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4), dimethyl ether (115-10-6), isobutane (75-28-5), propane (74-98-6), diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Reaction products of phosphoryl trichloride and 2-methyloxirane (1244733-77-4), dimethyl ether (115-10-6), isobutane (75-28-5), propane (74-98-6), diphenylmethanediisocyanate, isomeres and homologues (9016-87-9)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Disposal must be done according to official regulations. European waste catalogue. Do not discharge into drains or the environment. Do not dispose of with domestic waste.

Product/Packaging disposal recommendations : Recycle or dispose of in compliance with current legislation.

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
15 01 10* - packaging containing residues of or contaminated by dangerous substances

HP Code : HP3 - “Flammable:”
– flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C;
– flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;
– flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;
– flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;
– water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;
– other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.
HP5 - “Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:” waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.
HP6 - “Acute Toxicity:” waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
HP7 - “Carcinogenic:” waste which induces cancer or increases its incidence
HP4 - “Irritant – skin irritation and eye damage:” waste which on application can cause skin irritation or damage to the eye.
HP13 - “Sensitising:” waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1950	UN 1950	UN 1950	UN 1950	UN 1950
14.2. UN proper shipping name				
AEROSOLS	AEROSOLS	Aerosols, flammable	AEROSOLS	AEROSOLS
Transport document description				
UN 1950 AEROSOLS, 2.1, (D)	UN 1950 AEROSOLS, 2.1	UN 1950 Aerosols, flammable, 2.1	UN 1950 AEROSOLS, 2.1	UN 1950 AEROSOLS, 2.1
14.3. Transport hazard class(es)				
2.1	2.1	2.1	2.1	2.1
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-D EmS-No. (Spillage): S-U	Dangerous for the environment: No	Dangerous for the environment: No	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
Transport category (ADR) : 2
Tunnel restriction code (ADR) : D

Transport by sea

Special provisions (IMDG) : 63, 190, 277, 327, 344, 381, 959
Limited quantities (IMDG) : SP277
Excepted quantities (IMDG) : E0
Stowage and handling (IMDG) : SW1, SW22
Segregation (IMDG) : SG69

Air transport

PCA Excepted quantities (IATA) : E0
PCA Limited quantities (IATA) : Y203
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 203
PCA max net quantity (IATA) : 75kg
CAO max net quantity (IATA) : 150kg
Special provisions (IATA) : A145, A167, A802

Inland waterway transport

Classification code (ADN) : 5F
Special provisions (ADN) : 190, 327, 344, 625

Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E0

Rail transport
Classification code (RID) : 5F
Special provisions (RID) : 190, 327, 344, 625
Limited quantities (RID) : 1L
Excepted quantities (RID) : E0
Transport category (RID) : 2
Hazard identification number (RID) : 23

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

15.1.1. EU-Regulations

Other information, restriction and prohibition regulations : Take note of Directive 94/33/EC on the protection of young people at work. Take note of Directive 92/85/EC on the safety and health of pregnant workers at work. Aerosol Directive (75/324/EEC).

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	**Applicable on**
3(a)	FIREFOAM 1C
3(b)	FIREFOAM 1C ; Reaction products of phosphoryl trichloride and 2-methyloxirane ; diphenylmethanediisocyanate, isomeres and homologues
3(c)	Reaction products of phosphoryl trichloride and 2-methyloxirane
40.	FIREFOAM 1C
56.	diphenylmethanediisocyanate, isomeres and homologues
74.	diphenylmethanediisocyanate, isomeres and homologues

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

VOC Directive (2004/42)

VOC content : 18.5 % (192,6 g/l)

Seveso Directive (Disaster Risk Reduction)

Seveso III Part I (Categories of dangerous substances)	Qualifying quantity (tonnes)	
	Lower-tier	Upper-tier
P3a FLAMMABLE AEROSOLS 'Flammable' aerosols Category 1 or 2, containing flammable gases Category 1 or 2 or flammable liquids Category 1	150	500

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)

15.1.2. National regulations

Ireland

National regulations : Refer to S.I. No. 299/2007 (Safety, Health and Welfare at Work (General Application) Regulations 2007) on the protection of young people at work (Art. 143-146).

15.2. Chemical safety assessment

No 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
CAS-No.	Chemical Abstracts Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EWC	European waste catalogue
EC50	Median effective concentration
EC-No.	European Community number
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
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
UFI	Unique Formula Identifier
vPvB	Very Persistent and Very Bioaccumulative

Data sources : MSDSs of the suppliers. Information provided by the manufacturer. European Chemicals Agency, http://echa.europa.eu/.

Department issuing data specification sheet: : KFT Chemieservice GmbH
Im Leuschnerpark 3
D-64347 Griesheim

Phone: +49 69 305 34 700
Fax: +49 69 305 86 500
SDS Service: +49 69 305 34 740

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) 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 1A	Flammable gases, Category 1A
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
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.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs (respiratory system) through prolonged or repeated exposure (if inhaled).
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 (Oral)	H302	Calculation method
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

KFT SDS EU 11 - Version 25.1

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.