



Buildings are compartmentalised to delay the spread of fire from one area to another. These compartments are usually linked by fire doors to allow the flow of traffic around the building. Fire doors have two important functions in a fire; when closed they form a barrier to stop the spread of fire and when opened they provide a means of escape. Unprotected cavities between the door frame and the supporting construction can be easily exploited by fire and if not adequately sealed or protected, can undermine the fire performance of the fire door assembly.

Fire and Acoustic Fire Door Foam is a proprietary fire sealing media which has been specifically formulated to reinstate the fire resistance of cavities and gaps between pedestrian fire door assemblies and supporting constructions, for use in flexible partitions and masonry walls. The product has been extensively tested in accordance for 30 and 60 minutes fire resistance in accordance with BS 476:Part 22:1987 and BS EN 1634-1.

FIELD OF APPLICATION

Fire Door Foam is suitable for use in a wide range of construction and building fire stopping solutions, including:

- Cavity gap filling and perimeter pointing around fire doors
- Timber frames, softwood, hardwood and including MDF
- Up to 60 minutes fire resistance

PRODUCT FEATURES

- Suitable for use in Slim-line framing
- Compatible with plastic packers
- Does not require any additional backing and capping media

PRODUCT DATA

Gap width	Gap depth	Fire Resistance
0-33mm	Minimum frame depth of 70mm – Flexible or Solid Supporting Construction	Up to 60 minutes fire performance

Further information and guidance refer to Assessment Report Number WF385912

TEST DATA INFORMATION

Report Reference	Body	Fire Rating	Door Type	Test Standard
CFR1803082	Cambridge Fire Research	FD30	GRP – Composite doorset	BS 476: Part 20/22: 1987
CFR1803081	Cambridge Fire Research	FD30	Fire rated timber doorset	BS 476: Part 20/22: 1987
CFR1803081	Cambridge Fire Research	FD60	Fire rated timber doorset	BS 476: Part 20/22: 1987
WF389582	Exova	FD60	Fire rated timber doorset	BS EN 1634-1: 2014 & BS EN 1363-1: 2012
WF386228	Exova	FD30	Fire rated timber doorset	BS 476: Part 20/22: 1987
WF384623	Exova	FD60	Fire rated timber doorset	BS EN 1634-1: 2014 & BS EN 1363-1: 2012

INSTALLATION INSTRUCTIONS

1. Surfaces must be firm, clean, free of dust and loose particles. The cavity or voided area to be filled must be well moistened with water, this will aid installation adhesion to the substrate. It may be necessary to use a primer, prior to the application of the foam.
2. Optimum application temperature +10°C > +30°C [+20°C ideal].

3. Cans should not be left in an over-heated environment, temperatures above +50°C or exposed to direct sunlight.
4. Prior to application, ensure that the surrounding area is protected, in particular when using the foam in retrofit applications. It may also be necessary to mask and protect the surrounding area of the cavity, particularly in areas where the compartment may be decorated or furnished.
5. Shake the can for two minutes, until the foam inside becomes liquid. This is essential to ensure the performance of the product. Then attach the adapter or gun to the canister.
6. Fill the cavity from the base of the aperture slowly and build up the layers of the foam, ensuring that the void is filled. Take care not to over-fill the cavity.
7. Allow the foam to cure and using a sharp bladed instrument cut-off the expanded 'cured' foam.
8. Ensure that empty cans are disposed of by reference to local regulations.

PACKAGING INFORMATION

Fire Door Foam is available in:



750ml gun application



750ml hand held application

OTHER INFORMATION

The information contained herein is based upon the present state of our knowledge. Recipients of our products must take responsibility for observing existing laws and regulations.

Due to our policy of continuous improvement, Fire & Acoustic Seals Limited reserves the right to amend specifications without prior notice.

TECHNICAL SAFETY DATA:

PRODUCT TESTING

The product has been extensively tested for 30 and 60 minutes fire resistance in accordance with BS 476:Part 22:1987 and BS EN 1634-1. For further information and guidance, refer to Assessment Report Number WF385912.

SPECIFICATION OVERVIEW

Product characteristics and physical attributes:

Characteristics	Appearance – result
750ml canister	Approximately 38 litres
Cell structure	Medium fine in appearance
Tack time	4 - 8 mins, dependent upon environmental conditions
Tool time [cutting]	10 - 14 mins, dependent upon environmental conditions
Full stability load bearing [20mm bead]	After approximately 12 hours
Tensile strength DIN 53430	18N/cm ²
Elongation @ tension DIN 53430	30%
Shear strength DIN 53427	8N/cm ²
Thermal conductivity	0.04W/mk
Water absorption DIN 53433	0.3 vol. %

STRUCTURAL CONSTRUCTIONS

- Timber stud partitions, with or without plasterboard linings
- Steel stud partitions, with or without plasterboard linings
- Solid blockwork or masonry walls
- Low and high density concrete walls

MAINTENANCE AND INSTALLATION RECORDS

Since the product is not subject to routine and replacement programmes, Fire & Acoustic Seals Limited recommend that all firestopping materials are checked on a regular basis to ensure that the product remains integral. Replace and fit any damaged components to reinstate the fire resistance.

PRODUCT GUARANTEE

Providing the product is installed in accordance with the requirements of the guidance document the fire performance characteristics of the product is guaranteed for a period of 10 years.

TECHNICAL SUPPORT AND GUIDANCE

Should you require any further information regarding this product please contact us.

MATERIAL SAFETY DATA:

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: VXP

1.2 Relevant identified uses of the substance or mixture and uses advised against: Relevant uses: Foam. Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Fire & Acoustic Seals Limited
Units 6-11 Spartan Industrial Estate,
Brickhouse Lane,
West Bromwich, B70 0DH,
United Kingdom
Phone: +44 (0)121 521 2179
Fax: +44 (0)121 521 2183
Email: sales@fireandacousticseals.co.uk
www.fireandacousticseals.co.uk

1.4 Emergency telephone number: 112

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) n° 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.

Aerosol 1: Flammable aerosols, Category 1, H222

Aerosol 1: Pressurised container: May burst if heated., H229

Aquatic Chronic 4: Hazardous to the aquatic environment, long-term hazard, Category 4, H413

Carc. 2: Carcinogenicity, Category 2, H351

Eye Irrit. 2: Eye irritation, Category 2, H319

Lact.: Reproductive toxicity, effects on or via lactation, H362

Resp. Sens. 1: Sensitisation, respiratory, Category 1, H334

SECTION 2: HAZARDS IDENTIFICATION *(continued)*

Skin Irrit. 2: Skin irritation, Category 2, H315
 Skin Sens. 1: Sensitisation, skin, Category 1, H317
 STOT RE 2: Specific target organ toxicity, repeated exposure, Category 2, H373
 STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Label elements:

CLP Regulation (EC) n° 1272/2008:

Danger



Hazard statements:

Aerosol 1: H222 - Extremely flammable aerosol
 Aerosol 1: H229 - Pressurised container: May burst if heated
 Aquatic Chronic 4: H413 - May cause long lasting harmful effects to aquatic life
 Carc. 2: H351 - Suspected of causing cancer
 Eye Irrit. 2: H319 - Causes serious eye irritation
 Lact.: H362 - May cause harm to breast-fed children
 Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 Skin Irrit. 2: H315 - Causes skin irritation
 Skin Sens. 1: H317 - May cause an allergic skin reaction
 STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure
 STOT SE 3: H335 - May cause respiratory irritation

Precautionary statements:

PI01: If medical advice is needed, have product container or label at hand
 PI02: Keep out of reach of children
 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
 P302+P352: IF ON SKIN: Wash with plenty of water
 P304+P340: IF INHALED: Remove person to fresh air and keep 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
 P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
 P501: Dispose of the contents/containers in accordance with the current legislation on waste treatment

Supplementary information:

EUH204: Contains isocyanates. May produce an allergic reaction

Additional Labelling (Annex XVII, REACH):

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.

2.3 Other hazards: Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance: Non-applicable










3.2 Mixture:

Chemical description: Mixture composed of polyurethane in solvents

Components:

In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Chemical name/Classification		Concentration
CAS: 9016-87-9 EC: Non-applicable Index: 615-005-00-9 REACH: Non-applicable	4,4'-methylenediphenyl diisocyanate, isomers and homologues		ATP ATP01
	Regulation 1272/2008	Acute Tox. 4: H332; Carc. 2: H351; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335 - Danger	 
CAS: 75-28-5 EC: 200-857-2 Index: 601-004-00-0 REACH: 01-2119485395-27-XXXX	Isobutane		ATP CLP00
	Regulation 1272/2008	Flam. Gas 1: H220; Press. Gas: H280 - Danger	
CAS: 85535-85-9 EC: 287-477-0 Index: 602-095-00-X REACH: 01-2119519269-33-XXXX	Alkanes, C14-17, chloro		ATP ATP01
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Lact.: H362 - Warning	
CAS: 115-10-6 EC: 204-065-8 Index: 603-019-00-8 REACH: 01-2119472128-37-XXXX	Dimethyl ether		ATP CLP00
	Regulation 1272/2008	Flam. Gas 1: H220; Press. Gas: H280 - Danger	
CAS: 13674-84-5 EC: 237-158-7 Index: Non-applicable REACH: 01-2119480419-30-XXXX	Tris(1-chloro-2-propyl) Phosphate		Self-classified
	Regulation 1272/2008	Acute Tox. 4: H302 - Warning	
CAS: 74-98-6 EC: 200-827-9 Index: 601-003-00-5 REACH: 01-2119486944-21-XXXX	Propane		ATP CLP00
	Regulation 1272/2008	Flam. Gas 1: H220; Press. Gas: H280 - Danger	
CAS: 106-97-8 EC: 203-448-7 Index: 601-004-00-0 REACH: 01-2119474691-32-XXXX	Butane		ATP CLP00
	Regulation 1272/2008	Flam. Gas 1: H220; Press. Gas: H280 - Danger	
CAS: 6425-39-4 EC: 229-194-7 Index: Non-applicable REACH: 01-2119969278-20-XXXX	2,2'-dimorpholinyl-diethyl ether		Self-classified
	Regulation 1272/2008	Eye Irrit. 2: H319 - Warning	

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

This product is not classified as hazardous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or shower the person affected if necessary thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO2). IT IS RECOMMENDED NOT to use tap water as an extinguishing agent.

SECTION 5: FIREFIGHTING MEASURES *(continued)*

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures.

Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A: – Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B: – Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, manipulation and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

C: – Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D: – Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A: – Technical measures for storage

Minimum Temp.: 5 °C

Maximum Temp.: 30 °C

B: – General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Field of application of the product is described in Technical data sheet (TDS).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the work environment

Identification	Environmental Limits		
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	IOELV (8h)	1000 ppm	1920 mg/m ³
	IOELV (STEL)		
	Year	2015	

DNEL (Workers):

Identification		Short Exposure		Long Exposure	
		Systemic	Local	Systemic	Local
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	47.9 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	6.7 mg/m ³	Non-applicable
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1894 mg/m ³	Non-applicable

Identification		Short Exposure		Long Exposure	
		Systemic	Local	Systemic	Local
2,2'-dimorpholinyl-diethyl ether CAS: 6425-39-4 EC: 229-194-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	7.28 mg/m ³	Non-applicable

DNEL (General population):

Identification		Short Exposure		Long Exposure	
		Systemic	Local	Systemic	Local
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	Oral	Non-applicable	Non-applicable	0.58 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	28.75 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	2 mg/m ³	Non-applicable
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	471 mg/m ³	Non-applicable
2,2'-dimorpholinyl-diethyl ether CAS: 6425-39-4 EC: 229-194-7	Oral	Non-applicable	Non-applicable	0.5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0.5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1.8 mg/m ³	Non-applicable

PNEC:

Identification				
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	STP	80 mg/L	Fresh water	0.001 mg/L
	Soil	11.9 mg/kg	Marine water	0.0002 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	13 mg/kg
	Oral	10 g/kg	Sediment (Marine water)	2.6 mg/kg
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	STP	160 mg/L	Fresh water	0.155 mg/L
	Soil	0.045 mg/kg	Marine water	0.016 mg/L
	Intermittent	1,549 mg/L	Sediment (Fresh water)	0.681 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.069 mg/kg
Tris(1-chloro-2-propyl) Phosphate CAS: 13674-84-5 EC: 237-158-7	STP	Non-applicable	Fresh water	0.42 mg/L
	Soil	1.33 mg/kg	Marine water	0.42 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	2.96 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	2.96 mg/kg
2,2'-dimorpholinyl-diethyl ether CAS: 6425-39-4 EC: 229-194-7	STP	100 mg/L	Fresh water	0.1 mg/L
	Soil	1.58 mg/kg	Marine water	0.01 mg/L
	Intermittent	1 mg/L	Sediment (Fresh water)	8.2 mg/kg
	Oral	10 g/kg	Sediment (Marine water)	0.82 mg/kg

8.2 Exposure controls:



A. – General security and hygiene measures in the work place

In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the professional exposure limits. In case of using individual protection equipment they should have the CE marking in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.



SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.



B. – Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases, vapours and particles		EN 149:2001+A1:2009 EN 405:2001+A1:2009	Replace when an increase in resistance to breathing is observed and/or a smell or taste of the contaminant is detected.





C. – Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	NON-disposable chemical protective gloves		EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

D. – Ocular and facial protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face mask		EN 166:2001 EN 167:2001 EN 168:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.



E. – Bodily protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks, with antistatic and fireproof properties		EN 1149-1,2,3 EN 13034:2005+A1:2009 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2001 EN ISO 6530:2005 EN ISO 13688:2013 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk, with antistatic and heat resistant properties		EN 13287:2008 EN ISO 20345:2011 EN 13832-1:2006	Replace boots at any sign of deterioration.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

F. – Additional emergency measures

It is not necessary to take additional emergency measures.

Emergency Measure	Standards	Emergency Measure	Standards
 <p>Emergency shower</p>	<p>ANSI Z358-1 ISO 3864-1:2002</p>	 <p>Eyewash station</p>	<p>DIN 12 899 ISO 3864-1:2002</p>

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	19.53 % weight
V.O.C. density at 20 °C:	Non-applicable
Average carbon number:	Non-applicable
Average molecular weight:	Non-applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Aerosol
Appearance:	Non-applicable
Color:	Non-applicable
Odor:	Non-applicable

Volatility:

Boiling point at atmospheric pressure:	-25 °C (Propellant)
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	Non-applicable *
Relative density at 20 °C:	Non-applicable *
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Recipient pressure:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Flammability:

Flash Point:	-41 °C (Propellant)
Autoignition temperature:	240 °C (Propellant)
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

9.2 Other information:

Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Combustive materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Contains glycols. With possibility of effects that are hazardous to the health, it is recommended not to breathe the vapours for long periods of time.

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A. – Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B. – Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

C. – Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

D. – CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Exposure to this product can cause cancer. For more specific information on the possible health effects see section 2.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
- Reproductive toxicity: May cause harm to breast-fed children

E. – Sensitizing effects:

- Respiratory: Prolonged exposure can result in specific respiratory hypersensitivity.
- Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

SECTION 11: TOXICOLOGICAL INFORMATION (continued)

F. – Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

G. – Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Exposure in high concentration can cause a breakdown in the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.

- Skin: Based on available data, the classification criteria are not met, however, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

H. – Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute Toxicity		Genus
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	308.5 mg/L (4 h)	Rat
Isobutane CAS: 75-28-5 EC: 200-857-2	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L (4 h)	
Butane CAS: 106-97-8 EC: 203-448-7	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	658 mg/L (4 h)	Rat
Propane CAS: 74-98-6 EC: 200-827-9	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>5 mg/L (4 h)	
4,4'-methylenediphenyl diisocyanate, isomers and homologues CAS: 9016-87-9 EC: Non-applicable	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	11 mg/L (4 h) (ATEi)	
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	>20 mg/L (4 h)	
Tris(1-chloro-2-propyl) Phosphate CAS: 13674-84-5 EC: 237-158-7	LD50 oral	632 mg/kg	Rat
	LD50 dermal	2000 mg/kg	Rabbit
	LC50 inhalation	11 mg/L (4 h)	Rat
2,2'-dimorpholinyldiethyl ether CAS: 6425-39-4 EC: 229-194-7	LD50 oral	2025 mg/kg	Rat
	LD50 dermal	3038 mg/kg	Rabbit
	LC50 inhalation	>20 mg/L	

SECTION 12: ECOLOGICAL INFORMATION

Contains phosphates. Excessive discharge may cause eutrophication.

12.1 Toxicity:

Identification	Acute Toxicity		Species	Genus
Alkanes, C14-17, chloro CAS: 85535-85-9 EC: 287-477-0	LC50	0.1 - 1 mg/L (96 h)		Fish
	EC50	0.1 - 1 mg/L		Crustacean
	EC50	0.1 - 1 mg/L		Algae

Aquatic toxicity test data on the mixture (One-Component Foam (OCFI) containing 20% Mid Chained Chlorinated Paraffin (CAS 85535-85-9)):

ErC50 (Desmodesmus subspicatus) >1000 mg/l (72 h)

NOErC (Desmodesmus subspicatus) ≥1000 mg/l (72 h)

EC50 (Daphnia magna) >1000 mg/l (24 and 48 h)

NOEC (Daphnia magna) ≥1000 mg/l (24 and 48 h)

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
Tris(1-chloro-2-propyl) Phosphate CAS: 13674-84-5 EC: 237-158-7	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	0%

SECTION 12: ECOLOGICAL INFORMATION (continued)

12.3 Bioaccumulative potential:

Identification	Acute Toxicity	
Isobutane CAS: 75-28-5 EC: 200-857-2	BCF	27
	Pow Log	2.76
	Potential	Low
Tris(1-chloro-2-propyl) Phosphate CAS: 13674-84-5 EC: 237-158-7	BCF	5
	Pow Log	2.59
	Potential	Low
Propane CAS: 74-98-6 EC: 200-827-9	BCF	13
	Pow Log	2.86
	Potential	Low
Butane CAS: 106-97-8 EC: 203-448-7	BCF	33
	Pow Log	2.89
	Potential	Moderate
2,2'-dimorpholinyl-diethyl ether CAS: 6425-39-4 EC: 229-194-7	BCF	3
	Pow Log	
	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Isobutane CAS: 75-28-5 EC: 200-857-2	Koc	35	Henry	1.206E+5 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	9.84E-3 N/m (25 °C)	Moist soil	Yes
Dimethyl ether CAS: 115-10-6 EC: 204-065-8	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	1.136E-2 N/m (25 °C)	Moist soil	Non-applicable
Propane CAS: 74-98-6 EC: 200-827-9	Koc	460	Henry	7.164E+4 Pa·m ³ /mol
	Conclusion	Moderate	Dry soil	Yes
	Surface tension	7.02E-3 N/m (25 °C)	Moist soil	Yes
Butane CAS: 106-97-8 EC: 203-448-7	Koc	900	Henry	9.626E+4 Pa·m ³ /mol
	Conclusion	Low	Dry soil	Yes
	Surface tension	1.187E-2 N/m (25 °C)	Moist soil	Yes
2,2'-dimorpholinyl-diethyl ether CAS: 6425-39-4 EC: 229-194-7	Koc	786	Henry	2E-9 Pa·m ³ /mol
	Conclusion	Low	Dry soil	No
	Surface tension	Non-applicable	Moist soil	No

12.5 Results of PBT and vPvB assessment:

Non-applicable

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
16 05 04*	Gases in pressure containers (including halons) containing dangerous substances	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP3 Flammable, HP14 Ecotoxic, HP4 Irritant – skin irritation and eye damage, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP13 Sensitising, HP7 Carcinogenic

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex I and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated.
Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2015 and RID 2015:



14.1 UN number:	UN1950
14.2 UN proper shipping name:	AEROSOLS, flammable
14.3 Transport hazard class(es):	2
Labels:	2.1
14.4 Packing group:	N/A
14.5 Dangerous for the environment:	No
14.6 Special precautions for user	
Special regulations:	190, 327, 344, 625
Tunnel restriction code:	D
Physico-Chemical properties:	see section 9
Limited quantities:	1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 37-14:



14.1 UN number:	UN1950
14.2 UN proper shipping name:	AEROSOLS, flammable
14.3 Transport hazard class(es):	2
Labels:	2.1
14.4 Packing group:	N/A
14.5 Dangerous for the environment:	No
14.6 Special precautions for user	
Special regulations:	190, 277, 327, 344, 63, 959
EmS Codes:	F-D, S-U
Physico-Chemical properties:	see section 9
Limited quantities:	1 L
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2015:



14.1 UN number:	UN1950
14.2 UN proper shipping name:	AEROSOLS, flammable
14.3 Transport hazard class(es):	2
Labels:	2.1
14.4 Packing group:	N/A
14.5 Dangerous for the environment:	No
14.6 Special precautions for user	
Physico-Chemical properties:	see section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
 Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

SECTION 15: REGULATORY INFORMATION (continued)

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Contains more than 0.1 % of 4,4'-methylenediphenyl diisocyanate, isomers and homologues by weight. This product may not be distributed in its present form for first-time sale to the general public after 27th December 2010 unless the packaging contains protective gloves meeting the provisions of European Council Directive 89/686/CEE.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

Council Directive 75/324/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers

Commission Directive 94/1/EC of 6 January 1994 adapting some technicalities of Council Directive 75/324/EEC on the approximation of the laws of the relating Member States to aerosol dispensers

Commission Directive 2008/47/EC of 8 April 2008 amending, for the purposes of adapting to technical progress, Council Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers

Commission Directive 2013/10/EU of 19 March 2013 amending Council Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers in order to adapt its labelling provisions to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EU) N° 453/2010, Regulation (EC) N° 2015/830)

Modifications related to the previous security card which concerns the ways of managing risks. :

CLP Regulation (EC) n° 1272/2008:

· Hazard statements

Texts of the legislative phrases mentioned in section 2:

H222: Extremely flammable aerosol

H315: Causes skin irritation

H319: Causes serious eye irritation

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317: May cause an allergic skin reaction

H351: Suspected of causing cancer

H362: May cause harm to breast-fed children

H335: May cause respiratory irritation

H373: May cause damage to organs through prolonged or repeated exposure

H413: May cause long lasting harmful effects to aquatic life

H229: Pressurised container: May burst if heated

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) n° 1272/2008:

Acute Tox. 4: H302 - Harmful if swallowed

Acute Tox. 4: H332 - Harmful if inhaled

Aquatic Acute 1: H400 - Very toxic to aquatic life

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects

Carc. 2: H351 - Suspected of causing cancer

Eye Irrit. 2: H319 - Causes serious eye irritation

Flam. Gas 1: H220 - Extremely flammable gas

Lact.: H362 - May cause harm to breast-fed children

SECTION 16: OTHER INFORMATION (continued)

Press. Gas: H280 - Contains gas under pressure, may explode if heated
 Resp. Sens. 1: H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 Skin Irrit. 2: H315 - Causes skin irritation
 Skin Sens. 1: H317 - May cause an allergic skin reaction

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://esis.jrc.ec.europa.eu>

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

CL50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

Other information:

Classification procedure:

Acute Tox. 4: Calculation method

Aerosol 1: Calculation method

Aerosol 1: Calculation method

Carc. 2: Calculation method

Eye Irrit. 2: Calculation method

Lact.: Calculation method

Resp. Sens. 1: Calculation method

Skin Irrit. 2: Calculation method

Skin Sens. 1: Calculation method

STOT RE 2: Calculation method

STOT SE 3: Calculation method

Aquatic Chronic 4: Test data (FEICA Position Paper on the classification and labelling of One-Component Foam (OCFI) containing Mid Chained Chlorinated Paraffin (MCCP). (17.03.2015))

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.