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

1.1 Product identifier

Commercial Product Name	**PUP B1 750 Premium B1 Gun Foam**

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

Relevant identified uses	Foaming at constructional elements requiring advanced fire security standards, foaming in thermal insulation composite systems between EPS heat insulation panels, gaps of maximum 70 x 20 mm (depth x width), covered with mineral plaster, ideal construction and insulation foam for filling and sealing of cavities between brick work and window frames, window sills, roller blinds chassis etc., insulating of pipeline mountings.
Recommended restrictions	None under normal processing. Observe technical data sheet.

1.3 Details of the supplier of the safety data sheet

Company designation	fischerwerke GmbH & Co. KG Klaus-Fischer-Straße 1 D-72178 Waldachtal Telephone : +49(0)7443 12-0 FAX : +49(0)7443 12-4222 Email : info-sdb@fischer.de Internet : www.fischer.de
Marketer	Great Britain: Mrs Mirka Valovicova, fischer Fixing (UK) Ltd, Hithercroft Road, Wallingford, Oxfordshire, OX10 9AT, Tel. 01491 827 920, Fax 01491 827 950

1.4 Emergency telephone number

Emergency telephone 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	Flam. Aerosol 1; H222 Acute Tox. 4; 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

2.2 Label elements

Hazard pictogram


GHS02


GHS07


GHS08

Signal word	Danger
Hazardous component(s) to be indicated on label	4 , 4'-methylenediphenyl diisocyanate , isomers and homologues
H-statement(s)	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 .
P-statement(s)	P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P211: Do not spray on an open flame or other ignition source. P251: Pressurized container: Do not pierce or burn, even after use. P260: Do not breathe dust/fume/gas/mist/vapours/spray. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P405: Store locked up. P410+P412: Protect from sunlight. Do no expose to temperatures exceeding 50 oC/122oF. P501: Dispose of contents/container to special waste treatment
Further information	EUH204: Contains isocyanates. May produce an allergic reaction. 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. Keep away from sources of ignition - No smoking. Keep out of the reach of children. Buildup of explosive mixtures possible without sufficient ventilation. 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

Health hazard	None known.
Particular information pertaining specific risk for human / environment	None known.
Indication of danger	None known.
Hazard precautions	None known.

SECTION 3: Composition/information on ingredients

Hazardous ingredients

Ingredient		Classification (EC) 1272/2008	Concentration
4,4'-methylenediphenyl diisocyanate, isomers and homologues	CAS No. : 9016-87-9 REACH No. : The substance does not require registration according to Regulation (EC) No 1207/2006 [REACH].	Acute Tox. 4; 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	25.0 - 50.0 %
tris(2-chloro-1-methylethyl) phosphate	CAS No. : 13674-84-5 EC-No. : 237-158-7 REACH No. : 01-2119486772-26, 01-2119447716-31	Acute Tox. 4; H302	10.0 - 25.0 %
and isobutane	CAS No. : 75-28-5 EC-No. : 200-857-2 Index-No. : 601-004-00-0 REACH No. : 01-2119485395-27	Flam. Gas 1; H220 Compr. Gas; H280	2.5 - 10.0 %
dimethyl ether	CAS No. : 115-10-6 EC-No. : 204-065-8 Index-No. : 603-019-00-8 REACH No. : 01-2119472128-37, 01-2119519269-33	Flam. Gas 1; H220	2.5 - 10.0 %
propane	CAS No. : 74-98-6 EC-No. : 200-827-9 Index-No. : 601-003-00-5 REACH No. : 01-2119486944-21	Flam. Gas 1; H220 Press. Gas; H280	< 2.5 %
2,2-dimethylpropan-1-ol, tribromo derivative	CAS No. : 36483-57-5 EC-No. : 253-057-0	Eye Irrit. 2; H319	< 2.5 %

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	If symptoms persist, call a physician. Take off all contaminated clothing immediately.

	Remove/Take off immediately all contaminated clothing.
If inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If unconscious place in recovery position and seek medical advice.
In case of skin contact	Use mechanical handling equipment. IF ON SKIN: Gently wash with plenty of soap and water.
In case of eye contact	Use mechanical handling equipment. In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If swallowed	If swallowed, seek medical advice immediately and show this container or label. Clean mouth with water and drink afterwards plenty of water. Drink 1 or 2 glasses of water. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	No data available

4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention	No data available
Special medical treatment	No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Carbon dioxide (CO2) Dry powder Foam Water spray jet
Extinguishing media which must not be used for safety reasons	High volume water jet

5.2 Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases	Container may rupture on heating. Heating or fire can release toxic gas. May form explosive mixtures in air.

5.3 Advice for firefighters

Special protective equipment for firefighting	In the event of fire, wear self-contained breathing apparatus. In the event of fire and/or explosion do not breathe fumes.
Additional information on firefighting	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Keep containers and surroundings cool with water spray. Container may rupture on heating.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation, especially in confined areas. Keep away from sources of ignition - No smoking. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Environmental precautions	The product should not be allowed to enter drains, water courses or the soil. Prevent spreading over a wide area (e.g. by containment or oil barriers).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Allow to solidify, use mechanical handling equipment. Ensure adequate ventilation. Do not flush with water.

6.4 Reference to other sections

Reference to other sections	See chapter 8/13

6.5 Additional information

Other information	Treat recovered material as described in the section "Disposal considerations". Dispose of in accordance with local regulations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	Handle and open container with care. Provide sufficient air exchange and/or exhaust in work rooms. Vapours are heavier than air and may spread along floors. BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50°C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
Advice on protection against fire and explosion	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 other incandescent material. Keep away from sources of ignition - No smoking. In use, may form flammable/explosive vapour-air mixture. Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Storage space and container requirements	Keep containers tightly closed in a cool, well-ventilated place. Container may rupture on heating. Store in accordance with local regulations.
German storage class	LGK 2B (TRGS 510)

7.3 Specific end use(s)

Specific use(s)	installation foam . Further information: see technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

dimethyl ether

Great Britain

Long-term exposure value/ ppm	Long-term exposure value/ mg/m3	Short-term exposure value / ppm	Short-term exposure value / mg/m3	Source
400	766	500	958	19

Source : 19 - EH40/2005 Workplace exposure limits (2011)

Europe

Long-term exposure value/ mg/m3	Long-term exposure value/ ppm	Issuing date	Source
1 920	1 000	2000/39	24

Source : 24 - DIRECTIVE 2009/161/EU

8.2 Exposure controls

Respiratory protection	In case of inadequate ventilation wear respiratory protection.
Hand protection	professional users (long contact) :Wear protective gloves.
Suitable material :	butyl-rubber, Chloroprene, Nitrile rubber
Unsuitable material :	PVC disposable gloves
Material thickness :	>= 0,5 mm
Break through time :	>120 min
Remarks :	Replace when worn.
Reference substance :	Request information on glove permeation properties from the glove supplier.. Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). private users (short contact) :

Suitable material :	attached disposable gloves
Remarks :	Use gloves once only.
Eye protection	Tightly fitting safety goggles
Skin and body protection	Wear suitable protective equipment.
Note :	Choose body protection according to the amount and concentration of the dangerous substance at the work place.
General protective and hygiene measures	Smoking, eating and drinking should be prohibited in the application area. Avoid contact with skin, eyes and clothing. Take off all contaminated clothing immediately. Do not breathe vapors, mist or gas. Wash hands before breaks and at the end of workday. Keep away from food, drink and animal feedingstuffs. Use protective skin cream before handling the product.
Information on environmental protection regulations	No special environmental precautions required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Aerosol
Colour	yellow
Odour	characteristic
Odour threshold	not determined
pH	not applicable
Boiling point [°C]	not applicable (aerosol)
Flash point [°C]	< 100
Reference substance :	Aerosol
Evaporation rate [kg/(s*m²)]	No data available
Explosion limits [Vol-%]	
Lower limit :	1,7
Upper limit :	18,6
Vapour pressure [kPa]	6
Vapour density	not determined
Density [g/cm³]	1,06
Relative density	not determined
Water solubility [g/l]	immiscible

Solubility [g/l]	No data available
Partition coefficient n-octanol / water (log P O/W)	not determined
Autoinflammability	not auto-flammable
Decomposition temperature [°C]	not determined
Viscosity, dynamic [kg/(m*s)]	not determined
Risk of explosion.	In use, may form flammable/explosive vapour-air mixture.
Oxidising properties	No data available

9.2 Other information

Ignition temperature [°C]	235
Relative vapour density (air=1)	not determined
Solvent content [%]	0,6
Measuring method :	organic solvent

SECTION 10: Stability and reactivity

10.1 Reactivity

Thermal decomposition	No decomposition if stored and applied as directed.

10.2 Chemical stability

Chemical stability	Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid	Container may rupture on heating. No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid	No dangerous reaction known under conditions of normal use.

10.6 Hazardous decomposition products

Hazardous decomposition products	Carbon oxides nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Hazardous ingredients

4,4'-methylenediphenyl diisocyanate, isomers and homologues

Oral toxicity [mg/kg]	Test criterion	Test species	Remarks	Source
> 5000	LD50	rat	OECD 423	100

Source : 100 - 100

Dermal toxicity [mg/kg]	Test criterion	Test species	Source
> 5000	LD50	rabbit	100

Source : 100 - 100

Inhalative toxicity [mg/l]	Test criterion	Exposure duration	Source
1,5	LC50	4 h	100

Source : 100 - 100

Irritant effect on the respiratory tract	Irritant

tris(2-chloro-1-methylethyl) phosphate

Oral toxicity [mg/kg]	Test criterion	Test species	Source
2800	LD50	rat	100

Source : 100 - 100

Dermal toxicity [mg/kg]	Test criterion	Test species	Duration	Remarks	Source
> 2000	LD50	rabbit	24 h	OECD 402	100

Source : 100 - 100

Inhalative toxicity [mg/l]	Test criterion	Test species	Note	Exposure duration	Source
> 5	LC50	rat	OECD 403	4 h	100

Source : 100 - 100

ISOBUTANE

Oral toxicity [mg/kg]	Source
No data available	100

Source : 100 - 100

Dermal toxicity [mg/kg]	Source
No data available	100

Source : 100 - 100

Inhalative toxicity [mg/l]	Test criterion	Test species	Exposure duration	Source
> 50	LC50	rat	4 h	100

Source : 100 - 100

dimethyl ether

Inhalative toxicity [mg/l]	Test criterion	Test species	Exposure duration	Source
308	LC50	rat	4 h	100

Source : 100 - 100

propane

Oral toxicity [mg/kg]	Source
No data available	100

Source : 100 - 100

Dermal toxicity [mg/kg]	Source
No data available	100

Source : 100 - 100

Inhalative toxicity [mg/l]	Test criterion	Test species	Exposure duration	Source
20	LC50	rat	4 h	100

Source : 100 - 100

Irritant effect on skin	Irritating to skin and mucous membranes
Irritant effect on eyes	Irritating to eyes.
Sensitization	May cause sensitization by inhalation and skin contact.

11.2 Additional information

Other information (chapter 11.)	The product itself has not been tested.

SECTION 12: Ecological information

12.1 Toxicity

Hazardous ingredients

4,4'-methylenediphenyl diisocyanate, isomers and homologues

Toxicity to fish [mg/l]	Test criterion	Test species	Measuring method	Exposure duration	Source
> 100	LC50	Brachydanio rerio (zebra fish)	OECD Test Guideline 203	96 h	100

Source : 100 - 100

Toxicity to daphnia [mg/l]	Test criterion	Test species	Exposure duration	Measuring method	Source
> 1000	EC50	Daphnia magna (Water flea)	24 h	OECD Test Guideline 202	100

Source : 100 - 100

Toxicity to algae [mg/l]	Test criterion	Test species	Exposure duration	Source
> 1640	ErC50:	Scenedesmus subspicatus	72 h	100

Source : 100 - 100

NOEC (daphnia) [mg/l]	Test species	Measuring method	Exposure duration	Source
> 10	Daphnia magna (Big water flea).	OECD 202	21 d	100

Source : 100 - 100

Ready degradability

tris(2-chloro-1-methylethyl) phosphate

Toxicity to fish [mg/l]	Test criterion	Test species	Exposure duration	Source
98	LC50	Pimephales promelas (Pimephales promelas (fathead minnow))	96 h	100

Source : 100 - 100

Toxicity to daphnia [mg/l]	Test criterion	Test species	Exposure duration	Measuring method	Source
131	EC50	Daphnia magna (Water flea)	48 h	OECD Test Guideline 202	100

Source : 100 - 100

Toxicity to algae [mg/l]	Test criterion	Test species	Exposure duration	Measuring method	Source
82	EC50	Selenastrum capricornutum	72 h	OECD Test Guideline 201	100

Source : 100 - 100

Ready degradability

ISOBUTANE

Toxicity to fish [mg/l]	Source
27,98	100

Source : 100 - 100

Toxicity to daphnia [mg/l]	Source
14,22	100

Source : 100 - 100

Toxicity to algae [mg/l]	Source
7,71	100

Source : 100 - 100

Ready degradability

dimethyl ether

Toxicity to fish [mg/l]	Source
> 1000	100

Source : 100 - 100

Toxicity to daphnia [mg/l]	Source
> 4400	100

Source : 100 - 100

Toxicity to algae [mg/l]	Source
154,917	100

Source : 100 - 100

Ready degradability

propane

Toxicity to fish [mg/l]	Test criterion	Exposure duration	Source
> 1000	LC50	96 h	100

Source : 100 - 100

Toxicity to daphnia [mg/l]	Test criterion	Test species	Exposure duration	Source
14,22	LC50	Daphnia magna (Big water flea).	48 h	100

Source : 100 - 100

Toxicity to algae [mg/l]	Test criterion	Test species	Exposure duration	Source
7,71	EC50	Scenedesmus quadri-cauda (Green algae)	96 h	100

Source : 100 - 100

Ready degradability

2,2-dimethylpropan-1-ol, tribromo derivative

Ready degradability

12.2 Persistence and degradability

Elimination and distribution mechanisms	No information available.
Elimination in purification plant	No data available
Biodegradability	No data available

12.3 Bioaccumulative potential

Bioaccumulation	no data available
Bioconcentration factor (BCF)	No data available

12.4 Mobility in soil

Distribution in the environment	No data available
Mobility	
Mobility :	No data available

12.5 Results of PBT and vPvB assessment

Results of PBT characteristics determination	This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects

Further information on ecology	The product itself has not been tested.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal considerations	Disposal together with normal waste is not allowed. Special disposal required according to local regulations. The product should not be allowed to enter drains, water courses or the soil. Empty remaining contents.
Waste Code	080501 - waste isocyanates 160504 - gases in pressure containers (including halons) containing dangerous substances cured material: 200000 - MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
Uncleaned empty packaging	Dispose of as unused product.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
14.1 UN-No	1950	1950	1950
14.2 Description of the goods	AEROSOLS	AEROSOLS	
14.2 UN proper shipping name		AEROSOLS	Aerosols, flammable
14.3 Transport hazard class(es)	2	2.1	2.1
Remarks	inflammable	(maximum 1 L) flammable	
Labels	2.1 	2.1 	2.1 
Category	2		
Classification Code	5F		
Tunnel restriction code	D		

	Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
14.5 Environmental hazards		0: Non-marine pollutant	
EmS		F-D;S-U	
Stowage category		A	

14.6 Special precautions for user

Precautions	not required under normal use

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

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	not applicable

SECTION 15: Regulatory information

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

Additional regulations	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.
Water hazard class (self-classification)	1

15.2 Chemical safety assessment

Safety assessment	Not relevant. Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Relevant H-phrases	H220: Extremely flammable gas. H222: Extremely flammable aerosol. 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 .
EUH204: Contains isocyanates. May produce an allergic reaction.

Wording of the hazard classes

Flam. Aerosol: Flammable aerosol
Acute Tox.: Acute toxicity
Skin Irrit.: Skin irritation
Eye Irrit.: Serious eye irritation
Resp. Sens.: Respiratory sensitization
Skin Sens.: Skin sensitization
Carc.: Carcinogenicity
STOT SE: Specific target organ toxicity – single exposure
STOT RE: Specific target organ toxicity – repeated exposure
Flam. Gas: Flammable gas
Press. Gas: Gases under pressure

Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification	Evaluation
Flam. Aerosol 1; H222	Experimental data
Acute Tox. 4; H332	Calculated
Skin Irrit. 2; H315	Calculated
Eye Irrit. 2; H319	Calculated
Resp. Sens. 1; H334	Calculated
Skin Sens. 1; H317	Calculated
Carc. 2; H351	Calculated
STOT SE 3; H335	Calculated
STOT RE 2; H373	Calculated

Recommended restrictions

None under normal processing. Observe technical data sheet.

Modifications of the previous version are denoted with an asterisk (*).

This information is provided in accordance with the current status of our knowledge and experience. The Safety Data Sheet describes products with a view to relevant safety requirements. This information does not constitute a warranty of properties, features or qualities.