

BOSTIK PU GUNFOAM FIRE RETARDANT B1
Supersedes Date: No information available

Revision Date 14-Jan-2016
Version 1

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

1.1. Product Identifier

Product Name BOSTIK PU GUNFOAM FIRE RETARDANT B1
Pure substance/mixture Mixture

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

Recommended use Building and construction work.
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Company Name

Bostik BV
De Voerman 8
PO Box 303
5215 MH's-Hertogenbosch, The Netherlands
Tel: +31 736 244 244
Fax: +31 736 244 344

E-mail address SDS.box-EU@bostik.com

1.4. Emergency telephone number

United Kingdom	+44 (1785) 272650
Ireland	+353 (1) 8624900 (Monday- Friday 9am-5pm)

Section 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

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

Acute toxicity - Inhalation (Dusts/Mists)	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 - (H335)
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)
FLAMMABLE AEROSOLS	Category 1 - (H222)
FLAMMABLE AEROSOLS	Category 1 - (H229)

Unknown acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity
Unknown aquatic toxicity 30% of the mixture consists of component(s) of unknown hazards to the aquatic environment

2.2. Label Elements

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

Contains Isocyanic acid, polymethylenepolyphenylene ester
United Kingdom, Ireland - BE

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Signal Word
DANGER

Hazard statements

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
EUH204 - Contains isocyanates. May produce an allergic reaction

Precautionary Statements - EU (§28, 1272/2008)

P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P103 - Read label before use
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
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P405 - Store locked up
P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
P501 - Dispose of contents/ container to an approved waste disposal plant

Special provisions concerning the labelling of certain mixtures

Placed on the market in aerosol containers or in containers fitted with a sealed spray attachment
See section 7 for more information

2.3. Other Hazards

General Hazards No information available.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	EC No	CAS No	weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
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Isocyanic acid, polymethylenepolyphenylene ester	-	9016-87-9	40 - <80	STOT SE 3 (H335) STOT RE 2 (H373) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) Acute Tox. 4 (H332)	Exempt
2-Propanol, 1-chloro-, phosphate (3:1)	237-158-7	13674-84-5	20 - <40	Acute Tox. 4 (H302)	01-2119480419-30-XXXX
Propane	200-827-9	74-98-6	10 - <20	Flam. Gas 1 (H220) Press. Gas	01-2119486944-21-XXXX
Isobutane	200-857-2	75-28-5	10 - <20	Flam. Gas 1 (H220) Press. Gas	01-2119485395-27-XXXX
Dimethyl ether	204-065-8	115-10-6	10 - <20	Flam. Gas 1 (H220) Press. Gas	01-2119472128-37-XXXX

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

Note: ^ indicates not classified, however, the substance is listed in section 3 as it has an OEL.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice	Call 911 or emergency medical service. Remove and isolate contaminated clothing and shoes.
Inhalation	Move victim to fresh air. Immediate medical attention is required, Call a doctor immediately. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult.
Skin contact	Remove material from skin immediately. Wash skin with soap and water. Remove contaminated clothing and shoes. In the case of skin irritation or allergic reactions see a doctor.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. If symptoms persist, call a doctor.
Ingestion	Rinse mouth. Drink plenty of water.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

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

Symptoms	Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Dizziness.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically. Keep victim warm and quiet.
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Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Dry chemical, CO2 or water spray.

Large Fire Water spray or fog.

Unsuitable Extinguishing Media

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Full water jet

5.2. Special hazards arising from the substance or mixture

Ruptured cylinders may rocket.

Hazardous combustion products Carbon monoxide. Nitrogen oxides (NOx). Hydrogen chloride. Hydrogen cyanide.

5.3. Advice for firefighters

Caution! Container under pressure. Heating causes rise in pressure with risk of bursting. Cool container with water spray.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protection equipment. Remove all possible sources of ignition in the surrounding area. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas.

Ventilate the area.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Use water spray to reduce vapours or divert vapour cloud drift. Avoid allowing water runoff to contact spilled material. Prevent entry into waterways, sewers, basements or confined areas.

6.3. Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Do not direct water at spill or source of leak.

6.4. Reference to other sections

Reference to other sections Section 7: HANDLING AND STORAGE
SECTION 8: Exposure controls/personal protection
Section 13: DISPOSAL CONSIDERATIONS

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation, especially in confined areas. Use only in well-ventilated areas. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Pressurized container: Do not pierce or burn, even after use.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Recommended storage temperature. 10 - 35 °C. Observe local regulations / instructions for storage of pressurized containers. Keep from freezing.

7.3. Specific end use(s)

Other Information

Recommendation(s); Observe technical data sheet

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical Name	European Union	Ireland	United Kingdom
Dimethyl ether 115-10-6	TWA: 1000 ppm TWA: 1920 mg/m ³	TWA: 1000 ppm TWA: 1920 mg/m ³ STEL: 3000 ppm STEL: 5760 mg/m ³	STEL: 500 ppm STEL: 958 mg/m ³ TWA: 400 ppm TWA: 766 mg/m ³
Propane 74-98-6	-	TWA: 1000 ppm STEL: 3000 ppm As	-

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection

Tight sealing safety goggles. Face protection shield.

Hand Protection

Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.

Skin and Body Protection

Antistatic footwear. Wear fire/flame resistant/retardant clothing. Gloves made of plastic or rubber. Suitable protective clothing. Apron.

Respiratory Protection

Provide adequate ventilation. In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance Aerosol Foam
Colour No information available
Odour Characteristic
odour threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point/freezing point	No information available	
boiling point	No information available	
Flash Point	No information available	
Evaporation Rate	No information available	
flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper Flammability Limit	16	
Lower Flammability Limit	3	
vapour pressure	605	kPa
Vapour Density	No information available	
Specific gravity	No information available	
Water solubility	Immiscible in water	
Solubility in other solvents		
Partition coefficient	No information available	
Autoignition temperature	235 °C / 455 °F	
decomposition temperature	No information available	
Explosive properties	No information available	
Explosive limits	No information available	
Upper	No information available	

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Lower	No information available
Oxidising properties	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available

9.2. Other information

Softening point	No information available
Molecular Weight	No information available
Solvent content (%)	No information available
Solid content (%)	No information available
Density	1.048 g/cm ³
Bulk density	No Data Available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

None under normal use conditions.

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

Possibility of Hazardous Reactions

None under normal processing.

10.4. Conditions to avoid

Heating causes rise in pressure with risk of bursting.

10.5. Incompatible materials

Acids. Bases. Strong oxidising agents. Amines, Alcohols. Water.

10.6. Hazardous decomposition products

Hydrogen cyanide. Hydrogen chloride. Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Product Information

Harmful by inhalation.

Inhalation	No Data Available.
Eye contact	No Data Available.
Skin contact	No Data Available.
Ingestion	No Data Available.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Isocyanic acid, polymethylenepolyphenylene ester	= 49 g/kg (Rat)	> 9400 mg/kg (Rabbit)	= 490 mg/m ³ (Rat) 4 h

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2-Propanol, 1-chloro-, phosphate (3:1)	= 1500 mg/kg (Rat)	= 1230 mg/kg (Rabbit)	= 5 mg/L (Rat) 4 h
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Skin corrosion/irritation	Irritating to skin.
Serious eye damage/eye irritation	Irritant effect on the eyes.
Sensitisation	May cause sensitisation by inhalation. May cause sensitisation by skin contact.
Germ cell mutagenicity	Not applicable.
Carcinogenicity	Contains a known or suspected carcinogen.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target organ effects	Heart.
Aspiration hazard	No information available.
Unknown acute toxicity	0% of the mixture consists of ingredient(s) of unknown toxicity

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity No information available

Component Information

Data obtained on the component(s) include

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Isocyanic acid, polymethylenepolyphenylene ester	-	CL50 (96h) >1000 mg/L Fish (Danio rerio)	-
2-Propanol, 1-chloro-, phosphate (3:1)	EC50 72 h = 45 mg/L (Desmodesmus subspicatus) EC50 96 h = 4 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h = 56.2 mg/L (Brachydanio rerio static) LC50 96 h = 98 mg/L (Pimephales promelas static) LC50 96 h = 30 mg/L (Poecilia reticulata static) LC50 96 h = 180 mg/L (Leuciscus idus static)	EC50 48 h = 63 mg/L (Daphnia magna)

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Partition coefficient No information available

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

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12.6. Autres effets néfastes

No information available

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Improper disposal or reuse of this container may be dangerous and illegal.
European Waste Catalogue	08 05 01* waste isocyanates 16 05 04* gases in pressure containers (including halons) containing dangerous substances
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

IMDG

14.1 UN/ID no	UN1950
14.2 Proper Shipping Name	Aerosols
14.3 Hazard Class	2
14.4 Packing Group	Not regulated
Description	UN1950, Aerosols, 2
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	63,190, 277, 327, 344, 959
EmS-No	F-D, S-U
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1 UN/ID no	UN1950
14.2 Proper Shipping Name	Aerosols
14.3 Hazard Class	2.2
14.4 Packing Group	Not regulated
Description	UN1950, Aerosols, 2.2
14.5 Environmental Hazard	Not applicable
Classification code	5A
14.6 Special Provisions	None

ADR

14.1 UN/ID no	UN1950
14.2 Proper Shipping Name	Aerosols
14.3 Hazard Class	2.2
Hazard Labels	2.2
14.4 Packing Group	Not regulated
Description	UN1950, Aerosols, 2.2, (E)
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	327, 625, 344, 190
Classification code	5A
Tunnel restriction code	(E)

ICAO (air)

14.1 UN/ID no	Not regulated
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14.2 Proper Shipping Name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing Group Not regulated
14.5 Environmental Hazard Not applicable
14.6 Special Provisions None

IATA

14.1 UN/ID no UN1950
14.2 Proper Shipping Name Aerosols, flammable
14.3 Hazard Class 2.1
14.4 Packing Group Not regulated
Description UN1950, Aerosols, flammable, 2.1
14.5 Environmental Hazard Not applicable
14.6 Special Provisions A145, A167, A802
ERG Code 10L

Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

EU-REACH (1907/2006) - Candidate List of Substances of Very High Concern (SVHC) for Authorization in accordance with Article 59

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Restrictions on use

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Chemical Name	CAS No	Restrictions on use
Isobutane	75-28-5	28. 29.

EU-REACH (1907/2006) - Annex XIV - List of substances subject to Authorization

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H335 - May cause respiratory irritation

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled

H315 - Causes skin irritation

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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 if inhaled

H332 - Harmful if inhaled

Legend

SVHC: Substances of Very High Concern for Authorisation: Substance(s) of Very High Concern

PBT Persistent, Bioaccumulative, and Toxic (PBT) Chemicals

STOT (RE): Specific target organ toxicity - Repeated exposure

STOT (SE): Specific target organ toxicity - Single exposure

EWC: European Waste Catalogue

SECTION 8: Exposure controls/personal protection

Key literature references and sources for data

No information available

Prepared by Product Safety & Regulatory Affairs

Revision Date 14-Jan-2016

Indication of changes

Revision note Not applicable.

Training Advice No information available

Further information No information available

This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet