

SAFETY DATA SHEET

EXTRUDED POLYSTYRENE

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Extruded Polystyrene – STYROBOARD XPS Fire Retardant Grades

Chemical Name: Polystyrene with Hexabromocyclododecane (HBCD) FREE fire retardant additive.

Trade Names: FOAMEX STYROBOARD XPS. Comes in the form of polystyrene boards and wire-cut shapes usually a light green or light blue colour.

- Not Dangerous Goods according to ADG Code for the Transport of Dangerous Goods
- Not a Workplace Hazardous Substance according to the criteria of Safe Work Australia.

Use: Extruded Polystyrene boards and cut shapes for building and construction; underslab and perimeter insulation, cladding and mouldings and trims, void forms in concrete, light weight fill in civil works, Geofoam etc.

Note: Fire Retardant XPS is not approved for food contact in AS2070 – Plastic Materials for Food

MANUFACTURER / SUPPLIER CONTACT DETAILS:

Emergency Contact: Tony Katsigiannis 0455 835 216

VICTORIA

FOAMEX GROUP PTY LTD - ABN 80 109 683 909
31-33 Gatwick Rd, Bayswater Nth 3153, Phone (03) 8739 5800
17/21 Freight Dr, Somerton 3062, Phone (03) 9219 6200
430 Barry Rd, Coolaroo 3048, Phone (03) 9302 1022

SOUTH AUSTRALIA

FOAMEX POLYSTYRENE PTY LTD - ABN 94 088 759 264
15 Peachey Rd, Edinburgh North SA 5113, Phone (08) 8393 5900

NEW SOUTH WALES

FOAMEX POLYSTYRENE PTY LTD - ABN 94 088 759 264
31 Mavis St, Revesby 2212, Phone (02) 9773 1615

Section 2. HAZARD IDENTIFICATION

Emergency Overview

In normal use, does not present a Hazard. When heated to decomposition, product emits acrid smoke and irritating fumes. Keep away from heat, and ignition sources like sparks or flame. Target Organs: Central Nervous System, Eyes, Lungs.

Dangerous Goods: Not Dangerous Goods according to the ADG Code, IMDG Code and IATA

Hazardous Substance: Not a Workplace Hazardous Substance due to classifiable health effect hazards.

Precautionary Statements

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Take precautionary measures against static discharge.

Avoid release to the environment.

Response - In case of fire: Use Foam, Dry Agent, Carbon Dioxide for extinction.

Storage – No special requirements.

Section 3. COMPOSITION, INFORMATION ON INGREDIENTS

Component	CAS No.	Proportion %	w/w GHS Hazards at 100%
Polystyrene	9003-53-6	>91.5%	None
Brominate - SBS	1195978-93-8	<3%	
Blowing Agent Dimethylether	115-10-6	<5%	H220, H335, H336, AUH019, AUH044
1,1,1,2- Tetrafluoroethane (Refrigerant Gas 134a) 811-97-2		<5%	None

EIGA-0783: Contains fluorinated greenhouse gases covered by the Kyoto protocol.

EIGA-As: Asphyxiant in high concentrations.

Section 4. FIRST AID MEASURES

Eyes: Rinse eyes with plenty of water for at least 15 minutes while holding eyelids open. Seek medical attention if symptoms develop or persist.

Skin: Wash with soap and water.

Inhalation: Inhalation of small particles may occur.

Ingestion: Rinse out mouth with water. Do NOT induce vomiting. Get medical attention. XPS is not expected to be absorbed in the body.

First Aid Facilities: Normal wash room facilities nearby.

Note to Doctor: Treat symptomatically. For inhalation of decomposition fumes if overheating or combustion has occurred.

Section 5. FIRE AND EXPLOSION HAZARD INFORMATION

General

The solid extruded polystyrene is a combustible thermoplastic material which will melt and drip when ignited and will decompose with high heat to give off toxic combustion products, similar to the combustion products of burning timber (according to CSIRO information).

Autoignition Temp: 427°C

Extinguishing Media: Water spray, Foam, Carbon Dioxide (CO₂), Dry chemical. Do not use direct water stream.

Special Firefighting procedures: Firefighting must be equipped with self-contained breathing apparatus and full thermal and chemical protective clothing. Equipment must be thoroughly decontaminated after use.

Unusual Fire, Explosion and Decomposition Hazards: Risk of dust-air explosion in confined spaces if product is being granulated or abrasion cut producing dust. If exposed to fire, high heat will be developed and heavy black smoke will result. During combustion, Carbon Dioxide & Carbon Monoxide will be the primary decomposition products, Styrene and other Hydrocarbons may be produced.

Freshly extruded Foam Pieces: Styroboard XPS is expanded with a mixture of flammable and non-flammable gases. Keep freshly extruded foam pieces, in well-ventilated areas, away from heat, sparks or flame. These pieces or foam bead will exhibit a hydrocarbon halo which is particularly evident immediately after extrusion or cutting. The hydrocarbon halo declines thereafter and is generally no longer evident after 7 days storage at room temperature (20°C). The fire hazard diminishes markedly as the hydrocarbon concentration in the moulded foam declines during normal post production operations, storage, shipment and application (up to 21 days).

Section 6. ACCIDENTAL RELEASE MEASURES

Spillage: Small spills of cut or granulated pieces should be swept up and disposed into suitable containers or plastic bags.

Large spills: Clean up with shovel and broom. Secure in bundles to avoid blowing around.

Special Procedures: None required.

Section 7. HANDLING AND STORAGE

General

XPS is combustible, keep away from ignition sources, heat, sparks and open flames. Mechanical operations involving this material should be done in such a manner as to prevent or minimize dust generation. Small amounts of fines or dust may accumulate in material handling systems. If permitted to accumulate, these fines or dust can, under certain conditions, pose an explosion hazard. Every effort should be made to prevent suspension, concentration or accumulation of fines or dusts in, or around, material handling systems.

Good housekeeping must be maintained to avoid dust build from cutting or recycling operations on rafters, sills and similar areas which could lead to dust fires.

Storage

Store and use away from ignition sources, heat, sparks and open flames. Keep away from incompatibles such as oxidizing agents, and organic solvents. Store in a well ventilated area. Have appropriate extinguishing media available – sprinkler systems, portable fire extinguishers.

Section 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Standards:

Hazardous Decomposition Products (under fire conditions):

Carbon Monoxide 30 ppm 34 mg/m³ TWA (8 hrs)

Styrene 50 ppm 213 mg/m³ TWA (8 hrs) 100 ppm 416 mg/m³ STEL (15 mins)

Hydrogen Bromide 3 ppm 9.9 mg/m³ TWA (8 hrs) Peak Limitation

Gas build-up in confined spaces:

Dimethyl Ether 400ppm 760mg/ m³ TWA (8 hrs) 950mg/m³ STEL

Engineering Controls:

Take precautions to limit static electricity discharge if conveying ground offcuts or dust particles in air streams. Bond and ground all equipment and conveying ducts. Don't use plastic duct to convey materials. Earth continuity should be provided between all processing equipment and should be independently 'earthed' non electrical. See AS/NZS 1020 - The Control of Undesirable Static Electricity.

Personal Protective Equipment:

Eyes: Safety glasses

Inhalation: Where dust is formed during cutting expanded polystyrene (e.g. band saw, serrated fast wire cutting), wear a P1 dust respirator meeting AS/NZS 1715/1716.

Skin: Clothing should be sufficient to protect from prolonged direct contact.

Hand: Wear suitable protective cotton or leather gloves, where prolonged direct contact is expected.

Feet: Wear safety footwear.

General safety and hygiene measures: Avoid inhalation of dusts/mists/vapours. Avoid prolonged contact with the skin. Always wash hands before smoking, eating, drinking or using the toilet.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Low-density Solid, pieces, boards shapes

Colour: Generally coloured light green or light blue

Odour: Slight hydrocarbon odour

Boiling Point: Not applicable (decomposes)

Softening Point: 50-75°C (Polystyrene); Expands at 90-100°C

Melts at 170-190°C (Polystyrene)

Decomposition Temp: >240°C

Molecular Wt: >40,000

Molecular Formula: Polystyrene (C₆H₆CH₂CH₂)_n

Vapour Pressure: Not applicable

Volatile Content: < 1%

Specific Gravity: 0.03 - 0.045 (Floats on water)

Bulk Density: 30 - 45kg/m³

pH: Not applicable (insoluble in water)

Flammability: Polystyrene is a combustible material, it will melt and burn in a fire.

Solubility: Insoluble in water; Not dispersible in cold or hot water. Polystyrene is soluble in; Aromatic Hydrocarbons, ketones, organic solvents like Petrol.

Section 10. STABILITY AND REACTIVITY

Stability: Stable, under normal conditions of storage and use.

Conditions to Avoid: Heat, ignition sources, and incompatible materials

Incompatible Materials: Strong oxidizing materials; organic solvents it dissolves in.

Hazardous Decomposition Products: In a fire situation, Carbon Monoxide, Carbon Dioxide, Styrene Monomer, Hydrogen Bromide; Brominated Organic Decomposition Compounds can be expected.

Hazardous Reactions: Dust explosions may occur from accumulation of fine dry dust from cutting Extruded Polystyrene.

Hazardous Polymerization: Will not occur

Section 11. TOXICOLOGICAL INFORMATION

General

Exposure to dust may be irritating to the eyes. Skin or eye contact with heated material may cause burns, ensure operators wear appropriate clothing and gloves/respirators when required.

Ingestion: Small numbers of granules are not expected to be harmful if swallowed. Excessive quantities are highly unlikely to be swallowed.

Inhalation: Dust formed from cutting or recycling operations of the product may cause irritation to the upper respiratory tract. There is no evidence of skin sensitising potential. Fumes evolved from overheated material or hot wire cutting may cause respiratory irritation.

Skin: Not a skin irritant. Not harmful.

Eye: Granules are not a health hazard to eyes, but may cause mechanical irritation. Dusts may cause mechanical irritation. Decomposition fumes, from overheated melted material or hot wire cutting, may irritate the eyes.

Chronic Effects

No chronic effects for Polystyrene have been reported.

Polystyrene (as 100%):

Acute Oral Toxicity LD50 : >5000 mg/kg

Acute Skin Toxicity LD50 : >5000 mg/kg

Chronic toxicity: Chronic effects for Polystyrene have not been reported

Section 13. DISPOSAL CONSIDERATION

Dispose of in accordance with Local, State & Federal EPA waste regulations. Recycle, react, incinerate, or landfill, as appropriate, in an approved facility.

Section 14. TRANSPORT INFORMATION

Not Classified Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code); or by air according to the IACO (IATA Regulations), or by sea according to the IMO (IMDG Code).

Section 15. REGULATORY INFORMATION

Precautionary Statements:

Prevention - P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P273 - Avoid release to the environment.

Response - P370+378 - In case of fire: Use Foam, Dry Agent, Carbon Dioxide for extinction.

Storage – No special requirements. Store in a well-ventilated area.

Not a Scheduled Poison.

Hazardous Subs. Not a Workplace Hazardous Substance due to classifiable health effect hazards.

Safety Phrases

S61 Avoid release to the environment. Refer to special instructions/ Safety Data Sheets.

Section 16. OTHER INFORMATION

SDS Dates and Revisions

SDS Latest Revision Date: 20/3/19

Sections Changed in Latest Revision: General review of all Sections to align with GHS.

Contact Points phone: Mobile: 0455 835 216

Email: tonyk@foamex.com.au

SDS APPROVED: Foamex Group Pty Ltd

Acronyms Used

Polystyrene	Australian Code for the Transport of Dangerous Goods by Road & Rail
Safe Work Australia	Replaced the ASCC & NOHSC. Administers their documents.
HCIS	Hazardous Chemicals Information System at: www.hcis.safeworkaustralia.gov.au/
HSIS	Hazardous Substance Information System at: http://hsis.safeworkaustralia.gov.au/
GUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
GHS	Globally Harmonized System for Classification and Labelling of Chemicals. http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html
NZ EPA HSNO CCID	Environmental Risk Management Authority New Zealand, HSNO Chemical Classification Information Database. http://www.epa.govt.nz/search-databases/Pages/HSNO-CCID.aspx
ECHA	European Chemicals Agency at http://echa.europa.eu/
ECHA RSD	ECHA Registered Substances Database http://echa.europa.eu/information-on-chemicals/registered-substances
ECHA C&LID	ECHA Classification & Labelling Inventory Database http://echa.europa.eu/information-on-chemicals/cl-inventory-database
e-Chem Portal	Global Portal to Information on Chemical Substances http://www.echemportal.org/echemportal/index?
CAS No.	Chemical Abstracts Service Registry Number
UN No.	United Nations Dangerous Goods Number
SDS Code Used	This SDS has been prepared according to the Safe Work Australia Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals

This SDS summarises to the best of our knowledge the health and safety hazard information on the product and how to safely handle and use the product in the workplace, and should not be construed as guaranteeing specific technical properties. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Since methods and conditions are beyond our control, in inappropriate contexts we do not accept liability for any damages resulting from the use of, or reliance on, this information.