

# SAFETY DATA SHEET



Revision date: 14-Dec-2020

Revision Number 6

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** EXPANDABLE POLYSTYRENE (ALL GRADES)

**Product Code(s)** 000000016090

### Other means of identification

**UN number** 2211

**Synonyms** Expandable Polystyrene Beads; Polymeric Beads; EPS.

### Recommended use of the chemical and restrictions on use

**Recommended use** Production of polystyrene products.

**Uses advised against** No information available.

### Details of the supplier of the safety data sheet

#### Supplier

Ixom Operations Pty Ltd (Incorporated in Australia)  
NZBN: 9429041465226 Address: 166 Totara Street  
Mt Maunganui South  
New Zealand

Telephone Number: +64 9 368 2700

Facimile: +64 9 368 2710

### For further information, please contact

**Contact Point** Product Safety Department

### Emergency telephone number

**Emergency Telephone** **0 800 734 607 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Based on available information, not classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

### GHS Classification

### Label elements

### Hazard statements

**Other hazards which do not result in classification**

No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

Chemical name	CAS No.	Weight-%
Polystyrene	9003-53-6	>92%
n-Pentane	109-66-0	<7%
Non hazardous component(s)	-	to 100

**4. FIRST AID MEASURES****Description of first aid measures**

<b>Emergency telephone number</b>	Poisons Information Center, New Zealand: 0800 764 766 Poisons Information Center, Australia: 13 11 26
<b>Inhalation</b>	Remove to fresh air. Call a physician if symptoms occur.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.
<b>Skin contact</b>	Wash skin with soap and water. Call a physician if symptoms occur.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

**Most important symptoms and effects, both acute and delayed****Symptoms** No information available.**Indication of any immediate medical attention and special treatment needed****Note to physicians** Treat symptomatically.**5. FIRE FIGHTING MEASURES****Suitable Extinguishing Media****Suitable Extinguishing Media** Dry chemical, CO<sub>2</sub>, water spray or regular foam.**Unsuitable extinguishing media** High volume water jet.**Specific hazards arising from the chemical****Specific hazards arising from the chemical** Combustible material.**Hazardous combustion products** Carbon oxides. Styrene.**Special protective actions for fire-fighters**

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Hazchem code** 2Y

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin and eyes. Avoid generation of dust. Do not touch or walk through spilled material. Ensure adequate ventilation. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

**For emergency responders** Use personal protection recommended in Section 8.

### Environmental precautions

**Environmental precautions** See Section 12 for additional Ecological Information.

### 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** Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust.

### Precautions to prevent secondary hazards

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Avoid contact with skin and eyes. Avoid generation of dust. Take precautionary measures against static discharges.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a cool, well-ventilated place. Store away from sources of heat or ignition. Keep container closed when not in use.

**Incompatible materials** Strong oxidizing agents. Aromatic solvents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Limits** No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituent(s):

Pentane: WES-TWA 600 ppm, 1,770 mg/m<sup>3</sup>; WES-STEL 750 ppm, 2,210 mg/m<sup>3</sup>  
Particulates not otherwise classified: 8hr WES-TWA 10 mg/m<sup>3</sup> (inhalable dust) or 3 mg/m<sup>3</sup> (respirable dust)

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

WES - STEL (Workplace Exposure Standard - Short Term Exposure Limits) - The 15 minute average exposure standard. Applies to any 15 minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both short-term and eight-hour, time-weighted average exposures should be determined.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Appropriate engineering controls**

**Engineering controls**

Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

**Individual protection measures, such as personal protective equipment**

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, DUST MASK.



**Eye/face protection**

Glasses.

**Hand protection**

Impervious gloves.

**Skin and body protection**

Protective shoes or boots. Wear suitable protective clothing. Overalls.

**Respiratory protection**

If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Environmental exposure controls**

No information available.

**9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties

Physical state	Solid
Appearance	Spherical
Color	White
Odor	Slight Hydrocarbon
Odor threshold	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.03	None known
Water solubility	Insoluble in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Softening point	ca. 70-85°C
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**10. STABILITY AND REACTIVITY**Reactivity

Reactivity	No information available.
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Chemical stability

Stability	When the temperature is higher than 158-185F (70-85 °C), it starts to foam and releases the foaming agent.
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Explosion data

Sensitivity to mechanical impact	None.
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Sensitivity to static discharge	None.
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Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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Conditions to avoid

Conditions to avoid	Heat, flames and sparks.
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**Incompatible materials**

**Incompatible materials** Strong oxidizing agents. Aromatic solvents.

**Hazardous decomposition products**

**Hazardous decomposition products** Carbon oxides. Styrene.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Information on likely routes of exposure**

**Product Information** No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

<b>Inhalation</b>	May cause irritation.
<b>Eye contact</b>	Dust contact with the eyes can lead to mechanical irritation.
<b>Skin contact</b>	Contact with dust can cause mechanical irritation or drying of the skin.
<b>Ingestion</b>	May cause gastrointestinal discomfort if consumed in large amounts.

**Symptoms** No information available.

**Acute toxicity****Numerical measures of toxicity****Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
n-Pentane	> 2000 mg/kg ( Rat )	= 3000 mg/kg ( Rabbit )	= 364 g/m <sup>3</sup> ( Rat ) 4 h

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Not classified.
<b>Serious eye damage/eye irritation</b>	Not classified.
<b>Respiratory or skin sensitization</b>	Not a skin sensitizer.
<b>Germ cell mutagenicity</b>	No information available.

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	New Zealand	IARC
Polystyrene - 9003-53-6		Group 3

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity** Keep out of waterways.

**Terrestrial ecotoxicity** There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
n-Pentane	-	LC50: =9.87mg/L (96h, Oncorhynchus mykiss) LC50: =11.59mg/L (96h, Pimephales promelas) LC50: =9.99mg/L (96h, Lepomis macrochirus)	EC50: =9.74mg/L (48h, Daphnia magna)

### Persistence and degradability

**Persistence and degradability** Not readily biodegradable.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Mobility

**Mobility in soil** No information available.

### Component Information

Chemical name	Partition coefficient
n-Pentane	3.39

### Other adverse effects

**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste from residues/unused products** Dispose of product in packaging in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act. Treat the substance using a method that changes the characteristics or composition of the substance so that the substance is no longer a hazardous substance; or export the substance from New Zealand as waste.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. TRANSPORT INFORMATION

**ROAD AND RAIL TRANSPORT** Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous

Goods on Land.

UN number 2211  
 Proper shipping name POLYMERIC BEADS, EXPANDABLE  
 Hazard class 9  
 Packing group III  
 Hazchem code 2Y

**IATA** Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS. TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in Passenger and Cargo Aircraft; may be transported by Cargo Aircraft Only.

UN number 2211  
 UN proper shipping name POLYMERIC BEADS, EXPANDABLE  
 Transport hazard class(es) 9  
 Packing group III

**IMDG** Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number 2211  
 UN proper shipping name POLYMERIC BEADS, EXPANDABLE  
 Transport hazard class(es) 9  
 Packing group III  
 IMDG EMS Fire F-A  
 IMDG EMS Spill S-I

## 15. REGULATORY INFORMATION

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

#### New Zealand

**National regulations** See section 8 for national exposure control parameters

Chemical name	New Zealand HSNO Chemical Classification
n-Pentane - 109-66-0	3.1B,6.1E (All),6.1E (O),6.3B,6.4A,9.1D (All),9.1D (C)

#### International Inventories

**NZIoC** Contact supplier for inventory compliance status.  
**TSCA** Contact supplier for inventory compliance status.  
**DSL/NDSL** Contact supplier for inventory compliance status.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
**KECL** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AICS** Contact supplier for inventory compliance status.

#### Legend:

**NZIoC** - New Zealand Inventory of Chemicals  
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances



**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**- Australian Inventory of Industrial Chemicals**

### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## 16. OTHER INFORMATION

Supplier Safety Data Sheet 03/ 2020

### Prepared By

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

### Issuing Date:

14-Dec-2020

### Reason(s) For Issue:

5 Yearly Revised Primary SDS

### Revision Note:

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australian Industrial Chemicals Introduction Scheme (AICIS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 RTECS (Registry of Toxic Effects of Chemical Substances)  
 World Health Organization

**Disclaimer**

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

**End of Safety Data Sheet**