

## Product Safety Data Sheet

Classification according to Regulation (EC) No 1272/2008

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### 1.1 IDENTIFICATION OF THE SUBSTANCE OR PREPARATION

Product Range: Structherm Insulation (For SEWI Panels)  
 Expanded Polystyrene (EPS) Euroclass E

#### 1.2 COMPANY/UNDERTAKING IDENTIFICATION

Structherm Limited  
 Bent Ley Road  
 Meltham  
 Holmfirth  
 HD9 4AP

Tel: 01484 850098

Email of person responsible: info@structherm.co.uk

**Emergency Telephone:**  
 UK Emergency Number **999**

European Emergency Number **112**

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

#### 2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Expanded polystyrene containing residual amounts of Pentane expanding agent. Euroclass E products also contain a polymerised flame retardant

#### 2.2 DANGEROUS COMPONENTS/CONSTITUENTS

Component Name	CAS Number	EINECS	Content	Hazard
Pentane	109-66-0	203-692-4	< 1% wt	H220
	78-78-4	201-142-8		

Other Information CAS number for polymer component – 900 3-53-6 (Polystyrene)

### 3. HAZARDS IDENTIFICATION

#### 3.1 HUMAN HEALTH HAZARD

EPS is not known to lead to any skin irritations and is regarded as biologically inert. Residual quantities of Pentane and styrene monomer are insignificant. However during hot wire cutting of EPS if ventilation is not adequate the fumes generated can cause irritation to the respiratory tracts and eyes. Where substantial dust is produced in subsequent processing of EPS (e.g., band sawing or grinding), suitable dust extraction must be provided, to ensure that exposure does not exceed 10 mg/m<sup>3</sup> 8 Hours TWA (Occupational Exposure Limit for total inhalable dust).

### 3.2 SAFETY HAZARDS

EPS is organic and therefore combustible. The following fire precautions are recommended.

- 1 Smoking should be prohibited in the storage and processing areas.
  - 2 EPS should be stored away from highly flammable material such as paint or petroleum products.
  - 3 Storage and working areas should be kept free from rubbish which may spread fire or ignite spontaneously.
  - 4 Fire extinguishers and/or hose reels should be available at an easily recognisable fire point and at all times close at hand when welding or burning adjacent to EPS.
  - 5 Polystyrene dust, like other hydrocarbon based polymers in this form, is classified as a Group (a) flammable dust and precautions should be taken as required by Section 31 of the Factories Act 1961.
  - 6 If there is an outbreak of fire, the Fire Brigade should be called immediately and advised that EPS is involved. The area should be evacuated by all personnel, except those fighting the fire.
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## 4. FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

**Inhalation:** Only dust produced from machining EPS or small particles are likely to be inhaled. Clear the respiratory tracts. If recovery does not occur obtain medical attention.

**Skin:** No specific measures

**Eye:** Flush EPS particles from the eye with water. If rapid recovery does not occur obtain medical attention.

**Ingestion:** No specific measures

**Fire:** Inhalation of smoke or fumes - Remove from exposure into fresh air. Keep warm and at rest. If there is respiratory distress, give oxygen. If breathing stops or shows signs of failing, apply artificial respiration. Obtain immediate medical attention.

Skin Contact - Molten Material - Immediately flood affected area and adhering molten polymer with plenty of cold water. DO NOT attempt to remove molten or solidified material from the skin.

Obtain immediate medical attention.

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## 5. FIREFIGHTING MEASURES

### 5.1 SPECIFIC HAZARDS

Hazardous combustion products may include carbon monoxide and carbon dioxide

### 5.2 EXTINGUISHING MEDIA

Foam, water spray or fog. Dry chemical powder or carbon dioxide.

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

No specific measures

### 6.2 ENVIRONMENTAL PRECAUTIONS

None required

**6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP**

Dispose of in accordance with section 13.

**7. HANDLING AND STORAGE**

Store under cover in dry conditions taking into account recommendations in section 3 - Fire Precautions.

Stockpiles should not contain more than 60 cubic metres (about 1 tonne). If a bigger volume needs to be stored it should be divided into two or more stockpiles at least 20m apart.

EPS stockpiles should be sited so that in the event of a fire flowing or dripping molten material will not cause the spread of fire to other combustible materials or to other areas of a building, in particular staircases and corridors.

Storage should be in a level situation at ground level (not on ramps).

Raised thresholds to doorways or bunds should be provided where storage on upper floors is unavoidable (particularly to the edges of floors without upstands and around staircases). The bund walls should be of fire-resisting and liquid-tight construction.

The capacity of the bund area should be at least 3% of the maximum volume of EPS stored. Stockpiles should be sited in such a manner that permanently marked access ways can be maintained. Stockpiles should not impair the performance of any sprinkler system.

In warehouses or where large quantities of EPS are stored consideration should be given to the use of sprinklered premises.

On building sites EPS should be stored wherever possible in a fenced compound or building which can be secured, under cover protected from high winds and raised above damp surfaces. Protect from direct sunlight. Stack boards flat without bearers.

Storage temperature: Ambient.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

No specific protection is required when handling EPS

**8.1 OCCUPATIONAL EXPOSURE STANDARDS**

The following are the Maximum Exposure Limits (MEL) for the expansion agent and for the hazardous decomposition products:

Component Name	Limit type	Value	Unit	Other Info.
<b>Expansion agent</b>				
Pentane	TWA 8hr	1770	mg/m <sup>3</sup>	UK Solvents
Pentane	STEL 15min	2210	mg/m <sup>3</sup>	UK Solvents
<b>Decomposition products</b>				
Styrene Monomer	TWA 8hr	430	mg/m <sup>3</sup>	EH40
Styrene Monomer	STEL 15min	1080	mg/m <sup>3</sup>	EH40

TWA = Time Weighted Average - STEL = Short Term Exposure Limit

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

- |    |                                     |  |
|----|-------------------------------------|--|
| a) | <b>Physical State:</b>              | Cellular Foam.   |
| b) | <b>Form:</b>                        | Moulded shapes or sheets                               |
| c) | <b>Colour:</b>                      | White, Pink (Claymaster), grey (Premium)               |
| d) | <b>Density</b>                      | Ranges from 10kg/m <sup>3</sup> to 60kg/m <sup>3</sup> |
| e) | <b>Solubility in water</b>          | Not soluble  |
| f) | <b>Solubility in other solvents</b> | Soluble in aromatic, halogenated solvents and ketones  |
| g) | <b>Softening Point</b>              | 95-100°C   |
| h) | <b>Ignition temperature in air</b>  | 350°C  |
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**10. STABILITY AND REACTIVITY****10.1 STABILITY**

Stable under normal use conditions. Decomposition commences above 200°C.

**10.2 CONDITIONS TO AVOID**

Heat flames and sparks. Strong sunlight for prolonged periods.

**10.3 HAZARDOUS DECOMPOSITION PRODUCTS**

Styrene Monomer and carbon Monoxide when burned.

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**11. TOXICOLOGICAL INFORMATION**

Expanded polystyrene is non toxic and is not irritating to the skin or eyes.

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**12. ECOLOGICAL INFORMATION**

All products are not biodegradable and non toxic.

All products have zero Ozone Depleting Potential (ODP) and virtually zero Global Warming Potential (GWP).  
Products may contain some residual Pentane that has a very low Global Warming Potential of <0.00044.

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**13. DISPOSAL CONSIDERATIONS****13.1 WASTE DISPOSAL**

Recover or recycle if possible. Scrap expanded polystyrene is not classified as "Notifiable Waste" and may be disposed of in suitable land-fill tips or by incineration under approved conditions.  
Advice on the preferred method should be obtained at all times.

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**14. TRANSPORT INFORMATION****14.1 UN NUMBER**

2211

**15. REGULATORY INFORMATION**

<b>EC Label Name</b>	Expanded Polystyrene
<b>EUH018</b>	In use, may form flammable/explosive vapour-air mixture
<b>P210</b>	Keep away from heat/sparks/open flames/hot surfaces. No smoking

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**16. OTHER INFORMATION**

**Uses and Restrictions** Insulation of walls in domestic and other buildings.

**ISSUE** 28.07.22

**EH&S Distribution** This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.