



MSDS

Expandable Polystyrene Resin

SUPREME

ACCORDING TO EU-REGULATIONS 2015/830 (REACH), 1272/2008 (CLP) & 453/2010.

1. Product Identification and Company details:

Product Name : Expandable Polystyrene (EPS)
Product Grade/s : Fast Cycle - SE 160FC, SE 200FC, SE 230FC, SE 250FC,
SE 300FC, SE 300PFC, SE 330FC, SE340FC, SE 300HD
: High Expansion - SE 120BL, SE 160BL, SE 200BL, SE 230BL,
SE 250BL, SE 300BL, SE 300P BL
: Regular Grades - SE 160, SE 200, SE 230, SE 250, SE 300, SE 300P,
SE 350F
: Cup Grades – SE 271TM, SE 271TS,
Description Chemical : Expandable Polystyrene (Containing pentane as expanding agent)
Family : Plastic (Thermoplastic)
Manufacturing Company : Supreme Petrochem Ltd,
5th floor, Bldg No.11, 167 Guru Hargovindji Marg,
Andheri – Ghatkopar Link Road, Chakala,
Andheri (E), Mumbai – 400093, INDIA
Emergency Contact Number : 0091 22 6709 1900
Email : css@spl.co.in
Website : www.supremepetrochem.com

2. Hazards Identification:

Eye Contact : Solid or dust may cause irritation or corneal injury due to mechanical action.
Inhalation : Dust may cause irritation to upper respiratory tract (nose and throat).
Vapors released during thermal processing may cause respiratory irritation. Pentane vapors, given off at elevated temperature may cause headache, nausea, irritability and drowsiness.
Skin Contact : Prolonged contact is essentially nonirritating to skin. Mechanical injury only. Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.
Skin Absorption : No adverse effects anticipated by skin absorption.
Ingestion : Biologically inert. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.
Other effects : None

3. Composition Information:

Polystyrene (CAS 9003-53-6), containing pentane isomers as blowing agent.

Components:	CAS Registry Number:	Content (w/w):	REACH Registration No.:
Styrene Monomer	100-42-5	92 – 97	01-2119457861-32-0081
N-Pentane	109-66-0	3 - 8 *	---
Iso-Pentane	78-78-4	0 - 3 *	---
* All pentanes (Normal- & Iso-) Combined	---	3 – 8	---



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4. First- aid Measures:



In case of eye contact

: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If Inhaled

: Move person to fresh air; if effects occur, consult a physician.

In case of skin contact

: For serious burns, get medical attention. In case of skin contact with hot polymer immediately immerse in or flush with clean, cold water.

Ingestion

: No first aid procedures are required. Seek medical attention if a significant amount is swallowed

5. Fire Fighting Measures:

Extinguishing Media

: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

Fire Fighting Procedures

: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires.

Special Protective Equipment
for Firefighters

: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards

: Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate. Dense smoke is produced when product burns.

Hazardous Combustion Products

: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon dioxide. Carbon monoxide.

6. Accidental Release Measures:

Personal precautions

: Sweep up to prevent slipping hazard. Avoid breathing dust. Avoid dust formation. Pentane can form explosive mixture with air. The pentane vapour is heavier than air; beware of pits and confined spaces. Remove or make safe all sources of ignition. Avoid friction, sparks, or other means of ignition. Take precautionary measures against static discharges. Use only non-sparking tools.

Environmental precautions

: Do not contaminate surface water. Prevent product from entering drains

Methods for cleaning up

: Clean up promptly by sweeping or vacuum

Special advice

: Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).



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7. Handling and Storage:

Handling

: Provide adequate ventilation, including appropriate local extraction. Do not breathe fumes/vapor. Avoid generation of dust clouds. Should be kept away from naked flames and other sources of ignition. Extinguish any other fire. Remove or make safe all sources of ignition. Avoid friction, sparks, or other means of ignition. The electrical system should be spark-free. When using do not smoke. Take precautionary measures against static discharges. Ensure adequate earthing. Avoid release to the environment. Permission must be obtained from the appropriate Local Authority before disposing of waste material. Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient.

Storage

: Store in a cool, dry place in the original container when possible. Store at ambient temperature. Keep away from moisture, excessive heat and sources of ignition. Do not place in direct sunlight.

8. Exposure Controls / Personal Protection:

Exposure Control

: Ventilation, enclosures, or other controls may be needed to keep airborne contaminants below exposure limits.

Occupational Exposure Limits

: Following are limits for the expanding agent, during the conversion Process (expansion) the preparation evolves pentane.

SUBSTANCE	CAS No.	LTEL (8hr TWA ppm)	LTEL (8hr TWA mg/m ³)
Pentane (mixed isomers)	109-66-0 78-78-4	600	1800

(*LTEL: Long Term Exposure Limit; TWA: Time-Weighted Average)

Personal Protective Equipment

: Gloves required when handling hot material. In case of fire, wear self-contained breathing apparatus or equivalent and full protective gear.



Respiratory Protection

: Wear respiratory protection if ventilation is inadequate. Breathing protection if dust is formed.



Eye Protection

: Chemical workers goggles recommended.



Ventilation

: Provide adequate ventilation when processing material at elevated temperature

Other Protective Equipment

: N.A.



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9. Physical and Chemical Properties:

Physical State	: Spherical beads
Physical Form	: Solid
Color	: White
Vapour pressure	: 400 mm Hg @ 20 °C (Pentane)
Volatiles (By Volume)	: N/A
Odour	: Slight hydrocarbon
Vapour Density (air = 1)	: 2.5 (Pentane)
Boiling point	: N/A
Flash Point	: 51 – 80 °C (ASTM D3278) (Product) – 49 °C (Pentane)
Evaporation Rate	: None
Softening point	: 70-75°C (beads expand with evolution of pentane).
Solubility in water	: Insoluble
Specific gravity (water = 1)	: 0.95 -1.05
Solubility in other solvents	: Soluble in chlorinated solvents, aromatic solvents and ketones
Upper explosive limit (UEL)	: 7.8 % (v/v) (pentane).
Lower explosive limit (LEL)	: 1.5 % (v/v) (pentane)

10. Stability and Reactivity:

Chemical stability	: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Reactivity	: Stable under normal conditions.
Conditions to Avoid	: Keep away from heat, sources of ignition and direct sunlight.
Possibility of hazardous reactions	: In use, may form flammable/explosive vapour-air mixture.
Hazardous Decomposition Product(s)	: Pentane, styrene monomer, carbon monoxide (in case of fire or during hot wire cutting). Release of pentane increases with temperature. (beads expand with evolution of pentane), No decomposition if stored and applied as directed.

11. Toxicological Information:

Toxicity of this material has not been fully assessed	
Ingestion, Inhalation, Skin	: Non-toxic
Skin and eye Irritation	: Prolonged contact with product can result in skin and eye irritation.
Chronic effects of Over-exposure	: Not a known carcinogen.
Acute toxicity	: Not classified
Reproductive toxicity	: Not classified
Germ cell mutagenicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Oral	
LD 50 believed to be >5.0g/kg (rat)	: Practically Non-toxic
Inhalation	: Not Determined
Dermal	
LD 50 believed to be >2.0g/kg (rabbit)	: Practically Non-toxic

SUPREME PETROCHEM LTD

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12. Ecological Toxicity:

Do not allow to escape into waters, wastewater or soil.

Mobility: This product is insoluble and floats on water. Biodegradability: The product is not easily biodegradable. Bioaccumulation: Not expected to be bio accumulative Eco-toxicity : Not expected to be acutely toxic, but material in bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

13. Disposal Consideration:

Do not dump into any sewers, on the ground, or into any body of water. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

For unused & uncontaminated product, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

14. Transport Information:

(IATA / IMDG) PSN	: Polymeric beads, Expandable, evolving flammable vapor.
UN number	: UN2211
UN Class	: 9
UN Packaging group Sea/Air	: III
IMDG Marine pollutant	: No
IMDG EMS	: F-A
Environmental hazards	: None.
Transport in bulk according to Marpol and IBC Code	: Not available
Special precautions for user	: Keep away from any source of ignition



UN Class 9 miscellaneous hazard label

15. Regulatory Information:

The preparation is classified according to EC Directive 1999/45 and following amendments as:

R18	: In use, may for flammable/explosive vapor-air mixture.
R52/53	: Harmful to aquatic organisms may cause long term adverse effects in the aquatic environment. The preparation contains Pentane which is embedded in the polymer beads and is released very slowly by the preparation under advised handling and storage conditions. Therefore the preparation is not to be regarded as harmful for the environment in the form in which it is placed on the market (EC Directive 1999/45 of 03.05.1999, art. 12 paragraph 2)
Hazard Ratings	: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe.
Health	: 1
Fire	: 3
Reactivity	: 0



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16. Other Information:

This Safety Data Sheet was prepared in accordance with EU Regulation 2015/830 (REACH), 1272/2008 (CLP) & 453/2010.

Additional information on this product may be obtained by calling your sales or customer service contact.

Hazard pictogram(s)



GHS02



GHS08



GHS09

Recommended Uses and Restrictions: A Expandable Polystyrene - For industrial conversion as a raw material for manufacture of articles or goods. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

The information above is believed to be accurate and represents the best of our knowledge, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes