



Entec Polymers
1900 Summit Tower Blvd
Suite 900
Orlando, FL 32810
Telephone: 1 (800)-225-1529

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SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Trade Name: HYRENE
Product ID: PS-HI8/2

Physical Description: Natural Polystyrene

Company: Entec Polymers
1900 Summit Tower Blvd
Suite 900
Orlando, FL 32810

Telephone: 800-225-1529

Emergency Contact: (407) 875 – 9595

2. HAZARDS IDENTIFICATION

Emergency Overview:

Color: Natrual
Physical State: Pellets or Granules
Odor: Odorless to mild odor
Hazards of Product: Slipping hazard

OSHA Hazard Communication Standard

This product is not "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects:

Skin Contact: Prolonged contact is essentially nonirritating to skin. Mechanical injury only. Under normal processing conditions, material is heated to elevated temperatures: contact with material may cause thermal burns.



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- Eye Contact:** Solid or dust may cause irritation or corneal injury due to mechanical action. Elevated temperatures may generate vapor levels sufficient to cause eye irritation. Effects may include discomfort and redness.
- Skin Absorption:** No adverse effects anticipated by skin absorption.
- Inhalation:** No adverse effects are anticipated from single exposure to dust. Vapors/fumes released during thermal processing may cause respiratory irritation.
- Ingestion:** Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts of pellets. May cause choking if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS#	Amount
Styrene, 1,3-butadiene copolymer	9003-55-88	>= 96.0 %
White mineral oil (petroleum)	8042-47-5	<= 3.0 %

4. FIRST AID MEASURES

- Eye Contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. May cause injury due to mechanical action.



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- Skin Contact:** Wash skin with plenty of water. Seek first aid or medical attention as needed. If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately.
- Inhalation:** If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.
- Notes to Physician:** If burn present, treat as any thermal burn, after decontamination. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
- Emergency Personnel Protection:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential exposure exists refer to Section 8 for specific personal protective equipment.

5. FIRE-FIGHTING MEASURES

- Extinguishing Media:** Water fog or fine spray or foam. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.
- Fire Fighting:** 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. Use approved SCBA breathing apparatus and protective clothing.
- Special Protective Equipment for Firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from protected location or safe distance.
- Unusual Fire and** Pneumatic conveying and other mechanical handling operations can generate



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Explosion Hazards: combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate. Dense smoke may be 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, hydrocarbon fragments.

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken if Material is released or swallowed:

Sweep up. Recover spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Personal Precautions:

Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions:

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. HANDLING & STORAGE

General Handling:

No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Use with adequate ventilation. When appropriate, unique handling information for containers can be found on product label. Workers should be protected from the possibility of contact with molten resin. Do not get molten in eyes, on skin or clothing. Keep away from heat, sparks and flame. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Duct can be ignited by static discharge.

Storage

Store in dry place. Store in accordance with good manufacturing practices.



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8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Limits

Although some of the additives used in this product may have exposure guidelines, these additives are encapsulated in the product and no exposure would be expected under normal handling conditions.

Personal Protection:

Eye /Face Protection:

Use safety glasses. If there is a potential exposure to particles which could cause eye discomfort, wear chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection:

No precautions other than clean body-covering clothing should be needed when handling hot material, a safety shower should be located in the immediate work area.

Hand Protection:

Chemical protective gloves should not be needed when handling material. Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves to protect from mechanical injury. Selection of gloves will depend on the task. Use gloves with insulation for thermal protection, when needed.

Respiratory Protection:

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limits or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. Use an approved air-purifying respirator when vapors are generated at increased temperatures or when dust or mist is present. The following should be effective types of air-purifying respirators: When dust/mist are present use a/an Particulate filter. When combinations of vapors, acids, or dust/mist are present use a/an Organic Vapor Cartridge with a particulate pre-filter.



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Ingestion: Use good personal hygiene. Do not consume or store food in work area. Wash hands before smoking or eating.

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid Pellets or Granules
Appearance:	Small pellet shape
Color:	Natural
Odor:	Odorless to mild
Odor Threshold:	No test data available
Flash Point-Closed Cup:	Not applicable
Flammability (solid, gas):	No
Flammability Limits in Air:	Lower: Not applicable Upper: Not applicable
Vapor Density (air=1):	Not applicable
Specific Gravity (H₂O):	1.04 – 1.00 Supplier
Freezing Point:	Not applicable
Melting Point:	Not applicable
Water Solubility (by weight):	Negligible
Ph:	Not applicable
Autoignition Temperature:	No test data available
Vapor Pressure:	Not applicable
Boiling Point (760 mmHG):	
Decomposition:	No test data available
Temperature	
Partition coefficient, n-:	No data available for this product
Octanol/water (log Pow)	No test data available
Evaporation Rate (Butyl Acetate):	Negligible
Kinematic Viscosity:	No test data available



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10. STABILITY & REACTIVITY

Stability:	Stable at normal conditions of storage and handling.
Conditions to Avoid:	Avoid temperatures above 300 °C (572 °F). Exposure to prolonged elevated temperatures can cause product to decompose.
Incompatible Materials:	Not Known
Hazardous Polymerization:	Will not occur

Thermal Decomposition:

Decomposition products depend upon temperature, air supply and the presence of other materials. Processing may release fumes and other decomposition products. At temperatures exceeding melt Temperatures, polymer fragments can be released. Fumes can be irritating. Decomposition products Include and are not limited to: Combustible gases, hydrogen monoxide, carbon monoxide, hydrocarbon fragments.

11. TOXICOLOY INFORMATION

Acute Toxicity:

Ingestion:

LD50/oral/rat: > 5 g/kg estimated

Skin Absorption: The dermal LD50 has not been determined. Typical for this family of materials: Estimated:

LD50/dermal/rabbit: > 2 g/kg estimated

Repeated Dose Toxicity: Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.



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Chronic Toxicity and Carcinogenicity	No relevant information found.
Developmental Toxicity:	No relevant information found.
Reproductive Toxicity:	No relevant information found.
Genetic Toxicity:	No relevant information found.

12. ECOLOGICAL INFORMATION

Movement & Partitioning:	No bio concentration of the polymeric component is expected because of its high molecular weight. In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material will sink and remain in the sediment.
Persistence and Degradability:	This water-insoluble polymeric solid is expected to be inert in the environment. Surface photo degradation is expected with exposure to sunlight. No appreciable biodegradation is expected.
Ecotoxicity:	Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

13. DISPOSAL CONSIDERATIONS

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. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.



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14. TRANSPORTATION INFORMATION

DOT Non-Bulk	NOT REGULATED
DOT Bulk	NOT REGULATED
IMDG	NOT REGULATED
ICAO/IATA	NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION TRANSPORTATION INFORMATION

OSHA Hazard Communication Standard

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	No
Delayed (Chronic) Health Hazard	No
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.



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California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Component	CAS #	Amount
Ethylbenzene	100-41-4	<= 350.0PPM

However, please note that there is inadequate evidence of ethylbenzene causing cancer in humans. Ethylbenzene has not been classified as a carcinogen by the International Agency for Research on Cancer (IARC), US Environmental Protection Agency (EPA) or the National Toxicology Program (NTP).

In March 2008, the Office of Environmental Health Hazard Assessment's (OEHHA) Proposition 65 department proposed an NSRL of 54 µg/day (inhalation) for ethylbenzene. The objective of the above warning statement is to comply with the Prop 65 statute.

For guidance on Prop 65 labeling requirements for your products, please refer to the workbook published by the Plastics Packaging Council (PPC) available by calling the Customer Information number found on page 1 of this MSDS

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

16. OTHER INFORMATION

Product Literature:

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

Recommended Uses and Restrictions:

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.



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Legend:

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

Disclaimer:

This Material Safety Datasheet (SDS) information is provided based on the Hazard Communication Regulation for your region or country and for use of the persons required to receive this information under those regulations. The information is neither designed nor recommended for any other use or for use by any other person, including for compliance, with other laws. Entec Polymers does not warrant suitability for use of this SDS for any other material or product not specifically identified herein. Entec Polymers does not warrant accuracy or authenticity of this SDS unless it has been obtained directly from Entec Polymers. Modification of this SDS, unless specifically authorized by Entec Polymers is strictly prohibited. This SDS is based on information that is believed to be reliable, but may be subject to change as new information becomes available. Because it is not possible to anticipate all conditions of use, additional safety precautions may be required. Since the use of this material is not Entec Polymers control, each user is responsible for making its own determination as to the safe and proper handling of this material in its own particular use of this material. ENTEC POLYMERS MAKES NO REPRESENTATION OR WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Each user should read and understand this information and incorporate it into individual site safety programs as required by applicable hazard communication standards and regulations.

End of Safety Data Sheet