1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: General Purpose Polystyrene

This MSDS covers all prime grades of General Purpose Polystyrene including but not limited to the following grades:

- HIPS C3  GPPS C8
- HIPS C9  GPPS C12
- HIPS C8  GPPS C20
- GPPS C3

Recommended use of the chemical and restrictions on use
Use of the substance/mixture: Manufacture of plastic articles

Manufacturer/Supplier: Global Plastics, LP
21 Downing Street Front 1 New York, NY 10014
(Domestic) 1-800-417-4605 (International) +1-646-790-7200

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
Classifications (GHS-US)
- Combustible Dust

Classification (GHS-US)
- Combustible Dust

Label elements

GHS-US Labeling
Signal word (GHS-US): Warning
Hazard statements (GHS-US): If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

Hazards not otherwise classified
No additional information available

Unknown acute toxicity (GHS-US)
Not applicable

Additional information
Based on conditions common to industrial workplace use of this product:
Plastic bag or liner may cause a static ignition hazard. Spilled pellets may create a slipping hazard. Sweep up spillage and dispose of properly. Skin or eye contact with hot polymer can cause thermal burns. Processing the polymer at high temperatures may form vapors that irritate the eyes and respiratory tract.
3. COMPOSITION INFORMATION

Substance
Not applicable

Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polystyrene</td>
<td>9003-53-6</td>
<td>94.5 - 100</td>
</tr>
<tr>
<td>White mineral oil, petroleum</td>
<td>8042-47-5</td>
<td>0 - 5</td>
</tr>
<tr>
<td>Additives (chemical identity withheld as a trade secret)</td>
<td>Trade Secret</td>
<td>0 - 0.5</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Description of first aid measures

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. If necessary seek medical advice.

First-aid measures after skin contact: Gently wash with plenty of soap and water. Heated Material: For serious burns from heated material, get medical attention. In case of skin contact, immediately immerse in or flush with clean, cold water. Do not attempt to remove adhered material from skin.

First-aid measures after eye contact: Rinse eyes with water as a precaution. Obtain medical attention if irritation persists. In case of eye contact with hot material, cool immediately with plenty of water and obtain immediate medical treatment.

First-aid measures after ingestion: Remove material from mouth. Rinse mouth out with water. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation: Nuisance dusts can be irritating to the upper respiratory tract. Irritating vapors may form when the polymer is processed at high temperatures.

Symptoms/injuries after skin contact: Contact with skin or eyes with hot material may cause serious thermal burns to skin or eyes.

Symptoms/injuries after eye contact: Dust from this product may cause minor eye irritation. Contact with skin or eyes with hot material may cause serious thermal burns to skin or eyes.

Symptoms/injuries after ingestion: No effects are expected for ingestion of small amounts. May be a choking hazard.

Indication of any immediate medical attention and special treatment needed

No additional information available
5. FIRE FIGHTING MEASURES

Extinguishing media
Suitable extinguishing media: For small fire: Dry chemical. Carbon dioxide. Water. For large fire: Foam. Water spray. Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the chemical
Fire hazard: May be combustible at high temperature. May form combustible dust concentrations in air. Vapors generated from overheating/melting/decomposition may be flammable and may cause fire/explosion if source of ignition is present.

Explosion hazard: Potential dust explosion hazard. When dust becomes airborne and is exposed to an ignition source, sufficient combustible/flammable dust may exist to burn in the open or explode if confined.

Hazardous decomposition products in case of fire: Carbon oxides (CO, CO2), Aldehydes, Ketones, Hydrocarbons. Fire will produce dense black smoke. Soot.

Advice for firefighters
Firefighting instructions: Fight fire from safe distance and protected location. Avoid raising powdered materials into airborne dust, creating an explosion hazard. Apply aqueous extinguishing media carefully to prevent frothing/steam explosion. Prevent firefighting water from entering environment.

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Other information: May re-ignite itself after fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Emergency procedures for non-emergency personnel:
Material creates a slipping hazard on hard surfaces. Clean up spills from walking surfaces immediately.

Methods and material for containment and cleaning up
Methods for cleaning up: On land, sweep or shovel into suitable containers. Do not allow water contaminated with pellets or powder to enter any waterway, sewer or drain.

Other information: Dispose of contaminated material at an authorized site. Notify authorities if product enters sewers or public waters.

Reference to other sections
No additional information available
7. HANDLING AND STORAGE

Precautions for safe handling
Precautions for safe handling:
Ensure good ventilation of the work station. Wear personal protective equipment. Do not overheat the product. Avoid contact with heated product to prevent burns. When handled in bulk quantities, this product and its associated packaging may present a crushing hazard due to the large masses involved, possibly resulting in severe injury or death.

Combustible dust precautions: Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Use only non-sparking tools. Avoid raising powdered material due to explosion hazard. Prevent the build-up of electrostatic charge. The plastic packaging film used to secure bags of material on pallets can also develop static electricity -- remove packaging film in an area free from ignitable vapors/dust.

Processing or material handling equipment may generate dust of sufficiently small particle size, that when suspended in air may be explosive. Dust accumulations should be controlled through a comprehensive dust control program that includes, but is not limited to, source capture, inspection and repair of leaking equipment, routine housekeeping and employee training in hazards. Refer to the latest edition of the National Fire Protection Association (NFPA) 654 publication, “Standard for the Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries”, for complete discussion on dust explosion prevention and control measures.

Hygiene measures: Do not eat, drink or smoke when using this product. Keep away from food and drink. Always wash hands after handling the product.

Conditions for safe storage, including any incompatibilities
Technical measures: Ground/bond container and receiving equipment. Electrostatic charges may be generated when emptying sacks. It is recommended that sacks are emptied away from explosive atmospheres.

Storage conditions: Store at room temperature. Protect from heat and direct sunlight. Store in dry, cool, wellventilated area.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>USA ACGIH</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polystyrene</td>
<td>ACGIH TWA</td>
<td>10 mg/m³ (Inhalable fraction)</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>3 mg/m³ (Respirable Particles)</td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>Remark</td>
<td>Particulates, not otherwise classified</td>
</tr>
</tbody>
</table>
Exposure controls
Appropriate engineering controls: Provide readily accessible eye wash stations and safety showers. Ensure adequate ventilation. If handling results in dust generation or high temperatures, local exhaust ventilation should be provided to insure that exposure to dust or decomposition products does not exceed the exposure recommended levels.

Hand protection: Use insulated gloves when handling this material hot.
Eye protection: Safety glasses.
Skin and body protection: Wear suitable protective clothing. Safety foot-wear.
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.
Other information: In case of risk of overexposure to dust, vapour or fumes (during product processing), it is recommended that a local exhaust system is placed above the conversion equipment (a fume hood) and the working area must be properly ventilated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Solid
Appearance: Pellets.
Color: Transparent and colorless.
Odor: Odorless.
Odor threshold: No data available
pH: Not applicable
Relative evaporation rate (butyl acetate=1): No data available
Melting point: > 132 °C
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: No data available
Specific gravity / density: 1.04
Solubility: Water: Negligible.
Log Kow: No data available
Viscosity, kinematic: Not applicable
Viscosity, dynamic: No data available
Explosive limits: No data available

Other information
Softening point: Approximately 100°C
10. STABILITY AND REACTIVITY

Reactivity
Flowing product can create electrical charge, resulting sparks may ignite dust or cause an explosion in some concentration ranges.

Chemical stability
The product is stable at normal handling and storage conditions.

Possibility of hazardous reactions
Dust may form explosive mixture in air.

Conditions to avoid
To avoid thermal decomposition, do not overheat.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions: carbon monoxide, carbon dioxide, toxic fumes.

Exposure of polystyrene to extremely high temperatures (315°C or higher) for extended periods of time may cause partial decomposition. Chemicals that may be released include styrene monomer, benzene, and other hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Likely routes of exposure: Inhalation. Ingestion. Skin and eye contact.
Acute toxicity: Not classified

White mineral oil, petroleum (8042-47-5)
Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Not classified
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified

Polystyrene (9003-53-6)
Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified
12. ECOLOGICAL INFORMATION

Toxicity
Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Persistence and degradability
Polystyrene
Persistence and degradability: This material is persistent in the environment. Not readily biodegradable.
BOD (% of ThOD): Below detection limit

Bioaccumulative potential
Polystyrene
Bioaccumulative potential: This product is not expected to bioaccumulate through food chains in the environment.

Mobility in soil
Polystyrene
Ecology: soil low mobility

Other adverse effects
No additional information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Waste treatment methods: This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Transfer to a safe disposal area in accordance with federal, state, and local regulations.

Waste disposal recommendations: Recycle the material as far as possible.

Additional information: May be used as fuel in suitably designed installations.

14. TRANSPORT INFORMATION

US Transport (DOT) for Bulk Shipments (Non-Bulk Shipments May Differ)
Not a DOT controlled material

Transport by sea (IMDG)
Not an IMDG controlled material

Air transport (IATA)
Not an IATA controlled material
15. REGULATORY INFORMATION

**Polystyrene**

**TSCA**
All components of this product are listed or exempted from listing on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

**SARA 313**
This product contains no chemicals in excess of the applicable de minimis concentration that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Table 372.65).

SARA Section 311/312 Hazard Classes    Fire hazard

Export Control Classification Number (ECCN):    EAR99 (No License Required)

International regulations

**CANADA**

**Polystyrene**

**WHMIS Classification**
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR Uncontrolled product according to WHMIS classification criteria

**National inventories**
Listed on the Canadian DSL (Domestic Substances List)

**US State regulations**
California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity, not limited to any that may be listed below.

16. OTHER INFORMATION

**NFPA (National Fire Protection Association)**
NFPA health hazard : 0
NFPA fire hazard : 1
NFPA reactivity : 0

**HMIS III Rating**
Health : 0
Flammability : 1
Physical Hazard : 0
Personal Protection : See section 8 of SDS
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Caution do not use Global Plastics, LP. materials in applications involving implantation within the body direct or indirect contact with the blood pathway, contact with bone tissue fluid, blood or prolonged contact with mucus membranes. Global Plastics, LP. materials are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. Global Plastics, LP. will not provide to customers making devices for such applications any notice, certification or information necessary for such medical device use required by FDA regulation or any other statute. Global Plastics, LP. makes no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues or fluids.

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