1. **SECTION 1: Identification of the substance and of the company/undertaking**

1.1 **Product Identifier:**
- Identification on the label/Trade name: High Impact Polystyrene
- Product Code: HT-2797
- Identification of the product: Mixture of off-grade styrene polymers consisting of:
  - Polystyrene, or CAS# 009003-55-8 > 95%

1.2 **Relevant identified uses of the substance and uses advised against:**
1.2.1 **Identified uses:**
- It is used in injection molding and extrusion applications for the manufacture of various components in the industry.

1.2.2 **Uses advised against:**
- None known

1.3 **Details of the supplier of the Safety Data Sheet**

1.3.1 **Supplier**
- Worthen Industries
- Address: 3 East Spit Brook Road
  - Nashua, NH 03060
- Telephone: 603-888-5443

1.4 **Emergency telephone number:**
- Chemtrec 1-800-424-9300

2. **SECTION 2: HAZARDS IDENTIFICATION**

2.1 **Classification of the substance or mixture**

2.1.1 **Classification:**

2.1.2 **Regulation (EC) No. 1272/2008 (CLP)**
- Not classified as dangerous for supply/use

2.2 **Label elements**

2.2.1 **Label Elements**
  - Product name: High Impact Polystyrene
  - Hazard Symbol: None
  - Risk Phrases: None
  - Safety Phrases: None

2.2.2 **Label elements**
- According to Reg. (EC) No.1272/2008 (CLP)
  - Product Name: High Impact Polystyrene
  - Hazard Pictogram: None
  - Signal word(s): None
Hazard Statement(s) None
Precautionary statement(s) None

2.3 Other Hazards
The following information is based on a
Consideration of the properties of the main
Components of this mixture.
- Molten material can cause harmful
  burns
- Dust may have irritant effect on skin,
  eyes and air passages.

2.4 Additional Information None

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
Substance/Mixture: Polymer
Ingredient(s):
Mixture of off-grade styrene polymers consisting of:
Polystyrene, or CAS# 009003-55-8 > 95%

4. SECTION 4: FIRST AID MEASURES
4.1 Description of First Aid measures
Inhalation: Remove patient from exposure, keep warm and at rest
Skin Contact: Molten material can cause severe burns, do NOT try to
  peel molten polymer from the skin. Cool rapidly with
  water. Obtain medical attention.
Eye Contact: After initial flushing, remove any contact lenses and
  continue flushing. Continue irrigation until medical
  attention can be obtained.
Ingestion: Do NOT Induce vomiting. Provided the patient is
  conscious, wash out mouth with water and give 200-300
  ml (half a pint) of water to drink.

4.2 Most important symptoms and effects, both acute and delayed.
  Eyes and Skin Contact: Redness, Irritation

4.3 Indication of immediate medical attention
  and special treatment needed
  Unlikely to be required but if necessary, treat
  symptomatically.

5. SECTION 5: FIRE FIGHTING MEASURES
Product is not classified as flammable, but will burn on contact with flame or exposure to high
temperature. (See Section 9)

5.1 Extinguishing Media
Suitable Extinguishing Media
  Extinguish preferably with water spray, fog or foam. Dry
  chemical powder, carbon dioxide, sand or earth may be
  used for small fires only.
Unsuitable Extinguishing Media
  Do NOT use water Jet.

5.2 Special hazards arising from the
  substance or mixture
  This product may give rise to hazardous fumes in a fire.
  Hazardous Decomposition Product(s): Carbon monoxide,
  carbon dioxide, styrene.

5.3 Advice for Fire Fighters
  Fire Fighters should wear complete protective clothing,
  including self-contained breathing apparatus. Keep
  containers cool by spraying with water if exposed to fire.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES
6.1 Personal precautions, protective equipment, and emergency procedures
Avoid inhalation of dusts. Wear suitable protective clothing and eye/face protection. Ensure adequate ventilation.

6.2 Environmental precautions
Prevent entry into drains.

6.3 Methods and material for containment and cleaning up.
Small spillages: Sweep up and shovel into waste drums or plastic bags. Transfer to a container for disposal. Large spillages: Use vacuum equipment for collecting split materials, where practicable. Transfer to a lidded container for disposal or recovery.

6.4 Additional Information
Don’t use a brush or compressed air for cleaning surfaces or clothing. Clear spills immediately.

7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe handling

7.1.1 Protective measures
Avoid contact with heated or molten product. Avoid generation of dust. Do not breathe fumes/vapor. Provide adequate ventilation, including appropriate local extraction. Wash thoroughly after handling.

7.1.2 Advice on general occupational hygiene:
Don’t eat, drink or smoke in working area. Remove contaminated clothing before entering rest area.

7.2 Storage:
Store in a cool, dry, well-ventilated area. Keep away from incompatible substances.

8. SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters:

8.1.1 Occupational exposure limits:
Not available

8.1.2 Appropriate engineering controls:
Local exhaust at processing equipment to assure that Particulate levels are kept at recommended levels.

8.2 Personal Protection
Eye/Face Protection
Safety glasses are recommended to prevent particulate matter from entering eyes while grinding

Hand Protection
Protective gloves are required when handling hot polymer

Body Protection
Long sleeve cotton shirt and long pants if handling molten polymer

Respiratory Protection
None under normal processing, if ventilation is adequate.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance
Solid Pellets
Color
Grey
Odor
Faint/Odorless
pH
Not available
Melting Point (°C) 225-260°C/437-500°F
Boiling point/range (°C) Not Available
Flash Point (°C) >350°C
Evaporation Rate Not Available
Flammability Not Available
Ignition Temperature (°C) Not Available
Upper/Lower flammability/explosive limits Not Available
Vapor pressure (20°C) Not Applicable
Vapor Density Not Available
Relative Density (g/ml) 1.04 - 1.13
Water Solubility (g/l) at 20°C Insoluble
Decomposition temperature Not Available
Viscosity, dynamic (mPa s) Not Available
Explosive properties Danger of dust explosion in fine dusty form or when ground to a small particle size
Oxidizing properties Not Oxidizing

9.2 Other Information
Fat Solubility (solvent-oil to be specified) etc. Not Available
Surface tension Not Available
Oxidation-reduction Potential Not Available
Specific Gravity 1.33 - 1.43

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions
10.2 Chemical Stability Stable under normal conditions
10.3 Possibility of hazardous reactions Danger of dust explosion in fine dusty form or when ground to a small particle size
10.4 Conditions to Avoid Avoid generation of dust
10.5 Incompatible materials Strong oxidizing agents
10.6 Hazardous Decomposition Product(s) Trace quantities of styrene monomer, carbon monoxide, aldehydes, and organic acids may be formed.

11. SECTION 11: TOXICOLOGY INFORMATION
The assessment is based on information available on similar products

11.1 Information on toxicology effects

11.1.1 Polymer Acute toxicity
Inhalation Low acute toxicity
Ingestion Low oral toxicity. LD50 > 2000 mg/kg
Skin Contact Low acute toxicity> LD50 > 2000 mg/kg
Eye Contact Low acute toxicity

Irritation Dust may have irritant effect on skin, eyes and air passages. During thermal processing: May cause irritation to skin, eyes and respiratory system.

Corrosivity Not Classified
Sensitization It is not a skin sensitizer
Repeated dose toxicity Dusts – Repeated exposure to high levels may cause irritation to skin, eyes and respiratory system
Carcinogenicity: No data
Mutagenicity: No data
Toxicity for reproduction: No data

11.2 Other Information
The molten form can cause thermal burns if in contact with skin or eyes.

12. SECTION 12: ECOLOGICAL INFORMATION
The environmental hazard assessment is based on information available on similar products. Small particles may have physical effects on aquatic and terrestrial organisms.

12.1 Toxicity
Non-toxic to aquatic life

12.2 Persistence and degradability
Not readily biodegradable. Styrene homopolymers are susceptible to degradation by exposure to sunlight. Integrated environmental half-life expected to be >=100 days

12.3 Bioaccumulative potential
The products have low potential for bioaccumulation

12.4 Mobility in Soil
The product is essentially insoluble in water. The product has low mobility in soil. Sinks in water.

12.5 Effect on Effluent Treatment
No information available

12.6 Results of PBT and vPvB assessment
Not classified as PBT or vPvB

13. SECTION 13: DISPOSAL CONSIDERATIONS
Remove all packaging for recovery or disposal. Recover or recycle if possible. Bury on an authorized landfill site or incinerate under approved controlled conditions.

13.1 Waste Treatment Methods

13.2 Additional Information
Disposal should be in accordance with local, state or National legislation.

14. SECTION 14: TRANSPORT INFORMATION
Not classified as dangerous for transport

14.1 UN number
N/A

14.2 Proper Shipping Name
N/A

14.3 Transport hazard class(es)
N/A

14.4 Packing Group
N/A

14.5 Environmental hazards
N/A

14.6 Special precautions for user
N/A

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
N/A

15. SECTION 15: REGULATORY INFORMATION

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

15.1.1 EU REGULATIONS
Authorizations and/or restrictions on use None known

15.1.2 National Regulations
None Known

15.2 Chemical Safety Assessment
Not Available

16. SECTION 16: OTHER INFORMATION
This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) and 453/2010.

The following sections contain revisions or new statements: 1-16

**LEGEND**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTEL</td>
<td>LONG TERM EXPOSURE LIMIT</td>
</tr>
<tr>
<td>STEL</td>
<td>SHORT TERM EXPOSURE LIMIT</td>
</tr>
<tr>
<td>DNEL</td>
<td>DERIVED NO EFFECT LEVEL</td>
</tr>
<tr>
<td>PNEC</td>
<td>PREDICTED NO EFFECT CONCENTRATION</td>
</tr>
<tr>
<td>PBT</td>
<td>PERSISTENT, BIOACCUMULATIVE AND TOXIC</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent very Bioaccumulative</td>
</tr>
</tbody>
</table>

**Training Advice:**

Suitable information on safety in handling, storage and conversion of the product should be given to employees based on all the existing information.

**Disclaimer**

The data set forth in these sheets are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Worthen Industries makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereon.

End of Safety Data Sheet