



SAFETY DATA SHEET

Issue Date 06-Jul-2015

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Version 1

1. SECTION1: 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

Address:

Worthen Industries
3 East Spit Brook Road
Nashua, NH 03060
603-888-5443

Telephone:

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:

Directive 67/548/EEC & Directive 1999/45/EC-Not classified as dangerous for supply/use.

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:

Hazard Symbol:

Risk Phrases

Safety Phrases

According to Directive 67/548/EEC &

Directive 1999/45/EC

High Impact Polystyrene

None

None

None

2.2.2.

Label elements

Product Name

Hazard Pictogram

Signal word(s)

According to Reg. (EC) No.1272/2008 (CLP)

High Impact Polystyrene

None

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:
Skin Contact:

Remove patient from exposure, keep warm and at rest
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
Color
Odor
pH

Solid Pellets
Grey
Faint/Odorless
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 has 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

13.1 Waste Treatment Methods Remove all packaging for recovery or disposal. Recover or recycle if possible. Bury on an authorized landfill site or incinerate under approved controlled conditions.

13.2 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

LTEL	LONG TERM EXPOSURE LIMIT
STEL	SHORT TERM EXPOSURE LIMIT
DNEL	DERIVED NO EFFECT LEVEL
PNEC	PREDICTED NO EFFECT CONCENTRATION
PBT	PERSISTENT, BIOACCUMULATIVE AND TOXIC
vPvB	very Persistent very Bioaccumulative

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