STYRENE Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Trade name	**Impact Polystyrene**
Company	A&C Plastics Inc. 6135 Northdale Houston, Texas 77087 800.231.4175
Synonym	Polystyrene, HIPS, MIPS This MSDS covers all prime grades of Impact Polystyrene including but not limited to: 6##P1 6##P0 8##EP0 CX6### 7##P1 7##P0 8##EP1 CX7### 8##P1 8##P0 9##EP0 CX8### 9##P1 9##P0 9##EP1 CX9### where # can be any number.
MSDS Name	Polystyrene (Impact)
Chemical Family	Polymer.
CAS Registry Number	9003-55-8
Threshold Limit Value	Not available.

Code	PS_IMPACT_PELLETS
MSDS#	P83
Validation Date	**6/2/2003**
Print Date	6/2/2003

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits
1) Polystyrene (Impact)	9003-55-8	100	Not available.

Section 3. Hazards Identification

Physical State and Appearance	Solid. White Pellets
Emergency Overview	Irritating vapors to respiratory system and eyes may form when polymer is processed at high temperatures. Molten or heated material in skin contact can cause severe burns.
Routes of Entry	FOR HOT MATERIAL: Skin contact. Eye contact. Inhalation.
Potential Acute Health Effects	
Eyes	This product is not know to cause eye irritation. However, as with any chemical, some sensititive individuals **may** experience eye irritation upon contact. **Heated Polymer**: eye contact can cause serious thermal burns. Vapors formed when polymer is heated may be irritating to the eye.
Skin	No known acute effects of this product resulting from skin contact. However, in light of good industrial hygiene, exposure to any chemical should be kept to a minimum.
Inhalation	Negligible at room temperature. Nuisance dusts can be irritating to the upper respiratory tract. Irritating vapors may form when the polymer is processed at high temperatures.
Ingestion	No effects are expected for ingestion of small amounts.
Potential Chronic Health Effects	**CARCINOGENIC EFFECTS**: Classified NONE by NTP, NONE by OSHA. 3 (Not classifiable for human.) by IARC. **MUTAGENIC EFFECTS**: Not available. **TERATOGENIC EFFECTS**: Not available.
Medical Conditions Aggravated by Overexposure	There is no known effect from chronic exposure to this product. Repeated or prolonged exposure is not known to aggravate medical condition.
Overexposure /Signs/Symptoms	Not available.
See Toxicological Information (Section 11)	

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Section 4. First Aid Measures

Eye Contact	Rinse with water for a few minutes. Seek medical attention if necessary
Skin Contact	**Polymer:** NO known EFFECT on skin contact, rinse with water for few minutes. **Heated Polymer:** For seriouis burns from heated polymer, get medical attention. In case of skin contact, immediately immerse in or flush with clean, cold water.
Inhalation	Allow the victim to rest in a well ventilated area.
Ingestion	No First Aid procedures are needed.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	May be combustible at high temperature.
Auto-ignition Temperature	440°C (824°F)
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	Carbon oxides (CO, CO2) and soot.
Fire Hazards in Presence of Various Substances	No specific information is available in our database regarding the flammability of this product in presence of various materials.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not expected. Risks of explosion of the product in presence of static discharge: Possible. No specific information is available in our database regarding the product's risks of explosion in the presence of various materials.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO2, water spray, halon, or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Protective Clothing (Fire)	Wear MSHA/NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.
Special Remarks on Fire Hazards	Fire may produce irritating gases and dense smoke.
Special Remarks on Explosion Hazards	No additional remark.

Section 6. Accidental Release Measures

Small Spill and Leak	Pellets on the floor could present a serious slipping problem. Good housekeeping must be maintained at all times to avoid this hazard. Sweep, shovel, or vacuum material into clean containers.
Large Spill and Leak	Use a shovel to put the material into a convenient waste disposal container. Do not allow any potentially contaminated water with pellets to enter any waterway, sewer or drain.

Section 7. Handling and Storage

Handling	Handling of plastic may form nuisance dust. Protect personnel.
Storage	Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	
Eyes	Safety glasses.
Body	Coveralls.

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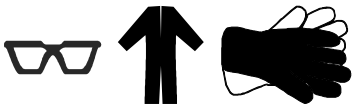
Respiratory	Ventilation is normally required when handling this product at high temperatures. Wear appropriate respirator when ventilation is inadequate.
Hands	Thermally insulated gloves required when handling hot material.
Feet	Safety slip proof shoes in areas where spills or leaks can occur.
Protective Clothing (Pictograms)	
Personal Protection in Case of a Large Spill	Safety glasses. Gloves. Coveralls

Product Name	**Exposure Limits**
1) Polystyrene (Impact)	Not available.

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Solid. White Pellets
Molecular Weight	Not available.
Molecular Formula	(-CH(C6H5)-CH2-)x (-CH2-CH=CH-CH2-)y

Odor	Odorless.
Taste	Not available.
Color	Polystyrene is translucent.

pH (1% Soln/Water)	Not applicable.
Boiling/Condensation Point	Not available.
Melting/Freezing Point	>132.22°C (270°F)
Critical Temperature	Not available.
Specific Gravity	1.04 (Water = 1)
Vapor Pressure	Not available.
Vapor Density	Not available.
Volatility	Negligible.
Odor Threshold	Not available.
Evaporation Rate	Not available.
VOC	0 (%)
Viscosity	Not available.
$LogK_{ow}$	Not available.
Ionicity (in Water)	Not available.
Dispersion Properties	Not available.
Solubility in Water	Insoluble in water.
Physical Chemical Comments	No additional remark.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable. Avoid Temperatures of 600°F or above.
Conditions of Instability	No additional remark.
Incompatibility with Various Substances	Reactive with strong oxidizing agents.

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Hazardous Decomposition Products	Hazardous decomposition products are carbon monoxide, carbon dioxide, dense smoke, and various hydrocarbons. Exposure of polystyrene to extremely high temperatures (600 deg F or higher) may cause partial decomposition. Chemicals that may be released include styrene monomer, benzene, and other hydrocarbons.
Hazardous Polymerization	No.

Section 11. Toxicological Information

Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	**CARCINOGENIC EFFECTS**: Classified None by NTP, None by OSHA. 3 (Not classifiable for human.) by IARC.
Other Toxic Effects on Humans	Not considered to be dangerous for humans according to our data base.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional remark.
Special Remarks on Other Toxic Effects on Humans	No additional remark.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Biodegradable/OECD	Not available.
Mobility	Not available.
	Not available.
Toxicity of the Products of Biodegradation	Not Available.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Information	Transfer to an approved disposal area in accordance with federal, state, and local regulations.
Waste Stream	Not available.
Consult your local or regional authorities.	

Section 14. Transport Information (for bulk shipments, non-bulk shipments may differ)

DOT Classification	Not a DOT controlled material (United States).
DOT Proper Shipping Name	Not applicable.
UN Number	Not established
Packing Group	Not available.
USCG Proper Shipping Name	Not Available
Marine Pollutant	Not available.
Hazardous Substances Reportable Quantity	Not available.

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Special Provisions for Transport	No additional remark.
TDG Classification	Not controlled under TDG (Canada).
ADR/RID Classification	Not controlled under ADR (Europe).
IMO/IMDG Classification	Not controlled under IMDG.
ICAO/IATA Classification	Not controlled under IATA.

Section 15. Regulatory Information

HCS Classification	Not controlled under the HCS (United States).
U.S. Federal Regulations	TSCA inventory: **Polystyrene (Impact)** SARA 313 toxic chemical notification and release reporting: No products were found. Clean water act (CWA) 307: No products were found. Clean water act (CWA) 311: No products were found. Clean air act (CAA) 112 accidental release prevention: No products were found. Clean air act (CAA) 112 regulated flammable substances: No products were found. Clean air act (CAA) 112 regulated toxic substances: No products were found.
International Regulations	
WHMIS (Canada)	Not controlled under WHMIS (Canada).
	CEPA DSL: Polystyrene (Impact)
EINECS	Not available.
DSCL (EEC)	Not controlled under DSCL (Europe).
International Lists	No products were found.
State Regulations	No products were found. California prop. 65: There are no Proposition 65 chemicals present in our polystyrene resins at levels that would require a warning under the California Safe Drinking Water and Toxic Enforcement Act.

Section 16. Other Information

Label requirements	Irritating vapors to respiratory system and eyes may form when polymer is processed at high temperatures. Molten or heated material in skin contact can cause severe burns.

Hazardous Material Information System (U.S.A.)

Health	*	0
Fire Hazard		1
Reactivity		0
Personal Protection		

National Fire Protection Association (U.S.A.)

References	-HSDB - Hazardous Substances Data Bank -RTECS - Registry of Toxic Effects of Chemicals Substances
Other Special Considerations	This product is made for industrial purposes only. Acceptable business/technical terms necessary for medical device applications must be developed by contacting your A&C Plastics, Inc. sales representative. Without such documented business terms, A&C Plastics, Inc. makes no representations, and disclaims all warranties, express or implied, concerning biocompatibility and/or suitability of this A&C Plastics Inc. product for medical device applications.

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