

Cartledge

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification																	
	Code PS_IMPACT_PELLETS																
	MSDS# P83																
	Validation Date 6/2/2003																
Synonym Polystyrene, HIPS, MIPS	Print Date 7/16/2003																
<p>This MSDS covers all prime grades of Impact Polystyrene including but not limited to:</p> <table style="margin-left: 40px; border: none;"> <tr> <td>6##P1</td> <td>6##P0</td> <td>8##EP0</td> <td>CX6###</td> </tr> <tr> <td>7##P1</td> <td>7##P0</td> <td>8##EP1</td> <td>CX7###</td> </tr> <tr> <td>8##P1</td> <td>8##P0</td> <td>9##EP0</td> <td>CX8###</td> </tr> <tr> <td>9##P1</td> <td>9##P0</td> <td>9##EP1</td> <td>CX9###</td> </tr> </table> <p style="margin-left: 40px;">where # can be any number.</p>		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###
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8##P1	8##P0	9##EP0	CX8###														
9##P1	9##P0	9##EP1	CX9###														
MSDS Name Polystyrene (Impact)	Responsible for Preparation Paul Bradley																
Chemical Family Polymer.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 2px;">In Case of Emergency</td> <td style="padding: 2px;">Chemtrec:</td> </tr> <tr> <td colspan="2" style="height: 20px;"></td> </tr> <tr> <td colspan="2" style="padding: 2px;">Technical Information</td> </tr> </table>	In Case of Emergency	Chemtrec:			Technical Information											
In Case of Emergency		Chemtrec:															
Technical Information																	
CAS Registry Number 9003-55-8																	
Threshold Limit Value Not available.																	
Manufacturer																	

Section 2. Composition and Information on Ingredients			
Name	CAS #	% by Weight	Exposure Limits
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	<p>Eyes This product is not known to cause eye irritation. However, as with any chemical, some sensitive individuals may experience eye irritation upon contact.</p> <p style="margin-left: 20px;">Heated Polymer: eye contact can cause serious thermal burns.</p> <p style="margin-left: 20px;">Vapors formed when polymer is heated may be irritating to the eye.</p> <p>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.</p> <p>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.</p> <p>Ingestion No effects are expected for ingestion of small amounts.</p>

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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)	

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 serious 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.

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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.

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
Polystyrene (Impact)	Not available.

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

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

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LogK _{ow}	Not available.
Ioncity (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.
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.

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

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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	National Fire Protection Association (U.S.A.)	
	Fire Hazard		1		
	Reactivity		0		
	Personal Protection				

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 ATOFINA Petrochemicals, Inc. sales representative. Without such documented business terms, ATOFINA Petrochemicals, Inc. makes no representations, and disclaims all warranties, express or implied, concerning biocompatibility and/or suitability of this ATOFINA product for medical device applications.

Validated by Paul Bradley on 6/2/2003.	Verified by Paul Bradley.
	Printed 7/16/2003.

Chemtec:
(800) 424-9300
ATOFINA Petrochemicals:
(800) 322-FINA

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