



Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Trade name Mountain Valley Mobius Sustainable Recycled Polystyrene **MSDS#** PS01

Supplier MOUNTAIN VALLEY RECYCLING
5501 Jeffrey Lane
Morristown, TN 37813 **Validation Date** 3/25/2008
Print Date 11/20/2009

Synonym Polystyrene.
This MSDS covers all grades of recycled Polystyrene. **Responsible for Preparation** MVR

MSDS Name Polystyrene - Recycled Grade

Chemical Family Polymer. **In Case of Emergency** MOUNTAIN VALLEY (423) 581-7558
Timothy Haynes
V.P. Plant Operations

CAS Registry Number 9003-53-6

Threshold Limit Value Not available. **Technical Information** MOUNTAIN VALLEY 5501 Jeffrey Lane
Morristown, TN. 37813 (423) 581-7558

Manufacturer MOUNTAIN VALLEY RECYCLING
5501 Jeffrey Lane
Morristown, TN. 37813

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits
Mobius Sustainable Polystyrene	9003-53-6	100	Not available.

Section 3. Hazards Identification

Physical State and Appearance Solid. 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 known to cause eye irritation. However, as with any chemical, some sensitive 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 at room temperature.
Heated Polymer: skin contact can cause serious thermal burns.

Inhalation Negligible hazard 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.

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Ingestion	No effects are expected for ingestion of small amounts. May be a choking hazard.
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	427°C (800.6°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. Risk of explosion from dust accumulation of this product is possible. See MSDS section 7 Handling for more information.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO2, water spray, halon, or foam. SMALL FIRE: Use DRY chemicals, CO2, water spray, halon, or foam.
Protective Clothing (Fire)	Wear MSHA/NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.

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Special Remarks on Fire Hazards Fire may produce irritating gases and dense smoke. Flowing material may produce static discharge, igniting dust accumulations.

Special Remarks on Explosion Hazards Processing or material handling equipment may generate dust of sufficiently small particle size, that when suspended in air may be explosive.

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. Pellets on the floor could present a serious slipping problem.

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 Avoid Temperatures of 600°F (316°C) or above. Handling of plastic may form nuisance dust. Protect personnel. Pneumatic material handling and processing 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. See NFPA 654.

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. Coveralls. Gloves.

Product Name
Polystyrene Mobius Sustainable Recycled Grade

Exposure Limits
Not available.

Consult local authorities for acceptable exposure limits.

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Section 9. Physical and Chemical Properties

Physical State and Appearance	Solid. Pellets.	Odor	Odorless.
Molecular Weight	Not available.	Taste	Not available.
Molecular Formula	$(-\text{CH}(\text{C}_6\text{H}_5)-\text{CH}_2-\text{)}_x$	Color	Polystyrene, glassy solid or off color form
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 (316°C) 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.

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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.
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 for Bulk Shipments (non bulk shipments may differ)	Not a DOT controlled material (United States).	
DOT Proper Shipping Name	Not applicable.	
UN Number	Not applicable.	
Packing Group	Not applicable.	

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USCG Proper Shipping Name Not Available

Marine Pollutant Not listed in Appendix B to 49CFR172.101

Hazardous Substances Reportable Quantity Not available.

Special Provisions for Transport No additional remark.

TDG Classification Not controlled under TDG (Canada).

IMO/IMDG Classification Not controlled under IMDG.

ICAO/IATA Classification Not controlled under IATA.



Section 15. Regulatory Information

HCS Classification This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. Federal Regulations TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
SARA 301/302/303
 No chemicals in this product are listed as extremely hazards substances in 40 CFR 355, Emergency Planning and Notification (Appendix A to Part 355).
SARA 304
 No chemicals in this product require reporting under the requirement of 40 CFR 355, Emergency Planning and Notification (SARA extremely hazardous substances listed in Appendix A to Part 355 or CERCLA hazardous substances listed in Table 302.4 of 40 CFR Part 302).
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 311/312
 This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and as such does not require reporting under the requirements of 40 CFR 370, Hazardous Chemical Reporting: Community Right-To-Know.
 Specific state and local regulations should be consulted to determine if there are any additional requirements. Because many states and localities have added requirements or incorporated the Federal contents in their own forms, Tier I & II should be obtained from the State Emergency Response Commission (SERC).
 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.

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International Regulations

WHMIS (Canada) Not controlled under WHMIS (Canada).

EINECS Not available.

DSCL (EEC) Not controlled under DSCL (Europe).

International Lists No products were found.

State Regulations No products were found.

Ethylbenzene was listed on California Proposition 65 in June 2004. Under the law, a warning must be given unless a business demonstrates that the exposure to the listed chemical poses no significant risk. With this notification Mountain Valley Recycling, LLC provides a "clear and reasonable" warning concerning the presence of this listed chemical at low levels in polystyrene. Mountain Valley Recycling, LLC has chosen to provide a warning simply based on its knowledge about the presence of the listed chemical as a constituent of the starting materials.

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 Acceptable business/technical terms necessary for medical device applications must be developed by contacting your TOTAL PETROCHEMICALS USA, INC. sales representative. Without such documented business terms, TOTAL PETROCHEMICALS USA, INC. makes no representations, and disclaims all warranties, express or implied, concerning biocompatibility and/or suitability of this product for medical device applications.

Validated by Daniel Schragr July 1, 2008
Mountain Valley Recycling
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Notice to Reader

To the best of our knowledge, the information contained herein is accurate and driven from our suppliers MSDS. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.