



Section 1. Chemical Product and Company Identification			
Trade name	TOTAL Polyethylene	Code	PE_PELLETS
Supplier	TOTAL PETROCHEMICALS USA, INC. P O Box 674411 Houston, TX 77267-4411	MSDS#	P101
Synonym	Polyethylene This MSDS applies to all grades of polyethylene, including but not limited to: MS201 BN, WR201 BN, DF 210, HL 328, BM359 SG, HP401 N, HL 428, HL 525, HL 535, B5845, CD-471, CD-481, CD-522, CD-582, ER 2277, HR 515, RS 528, BM927, BM937, BM961, HDPE #####, M3302, M3410 EP, M2710 EP, D3710, D4720, CD 4300, 5###, 5202 LD, 5502BN, 5502BZ, 5502LD, 6110, 6250, 6280, 6407.#, 6410, 6420, 6450, 37120, 46060UV, 50100.#, 54050, 1285, 1288, 2280 XP, 2285, 2287, 2290, 3344N, 7194, 7195, 7208, 8183, 8208, 9458, XT-10N, where # can be any number. It also includes any of the above named grades with the "-NA" suffix. This MSDS also covers experimental materials, BDM1 xx-xx, BDM2 xx-xx, and specially compounded samples labeled TOTAL PETROCHEMICALS Polyethylene Nxxxxx and Nxxxxx-x, where x can be any number.	Validation Date	10/7/2009
MSDS Name	Polyethylene Pellets	Print Date	10/7/2009
Chemical Family	Polymer	Responsible for Preparation	Paul Bradley
CAS Registry Number	9002-88-4 or 25213-02-9 or 25087-34-7	In Case of Emergency	Chemtrec: (800) 424-9300 TOTAL PETROCHEMICALS USA, INC: (800) 322-3462
Threshold Limit Value	Not available.	Technical Information	TOTAL PETROCHEMICALS USA, INC. La Porte Research and Technology PO Box 1200 Deer Park, Tx. 77536 281-884-7500
Manufacturer	TOTAL PETROCHEMICALS USA, INC. P.O. Box 5010 La Porte, TX 77572-5010		

Section 2. Composition and Information on Ingredients			
Name	CAS #	% by Weight	Exposure Limits
Polyethylene Homopolymer or Ethylene-1-hexene Copolymer or Ethylene-1-butene Copolymer	9002-88-4 25213-02-9 25087-34-7	~100	Not available.

Section 3. Hazards Identification

Physical State and Appearance	Solid. (Solid)
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	
<i>Eyes</i>	Dust may cause mechanical irritation to eye. Heated Polymer: Eye contact can cause serious thermal burns. Vapors formed when polymer is heated may be irritating to the eye.
<i>Skin</i>	No known acute effects of this product resulting from skin contact at room temperature. Heated Polymer: skin contact can cause serious thermal burns.
<i>Inhalation</i>	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.
<i>Ingestion</i>	No effects are expected for ingestion of small amounts. May be a choking hazard.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Polyethylene is not a known carcinogen. Not listed as a carcinogen by OSHA, NTP or IARC.
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	No adverse health effects anticipated from the solid pellet.
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.

Section 5. Fire Fighting Measures

Flammability of the Product	May be combustible at high temperature.
Auto-ignition Temperature	349°C (660.2°F)
Flash Points	CLOSED CUP: 341°C (645.8°F).
Flammable Limits	Not available.
Products of Combustion	Carbon oxides (CO, CO ₂) 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.

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Fire Fighting Media and Instructions	SMALL FIRE: Dry chemical extinguisher (ABC or AB). Use water spray or fog. LARGE FIRE: Use water spray or fog. Do not use water jet. May re-ignite itself after fire is extinguished.
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. 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. 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. 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. When handled in bulk quantities, this product and its associated packaging may present a crushing hazard due to the large masses involved, possibly resulting in severe injury or death.
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	<p><i>Eyes</i> Safety glasses.</p> <p><i>Body</i> Coveralls.</p> <p><i>Respiratory</i> Ventilation is normally required when handling this product at high temperatures. Wear appropriate respirator when ventilation is inadequate.</p> <p><i>Hands</i> Thermally insulated gloves required when handling hot material.</p> <p><i>Feet</i> Shoes.</p>
Protective Clothing (Pictograms)	
Personal Protection in Case of a Large Spill	Gloves. Coveralls. Personal protective equipment

Product Name	Exposure Limits

Polyethylene Not available.
 or
 Ethylene-1-hexene Copolymer
 or
 Ethylene-1-butene Copolymer

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Solid. (Solid)	Odor	Odorless.
Molecular Weight	Not applicable.	Taste	Not available.
Molecular Formula	(-CH ₂ -CH ₂ -) _x	Color	Translucent white pellets.
Melting/Freezing Point	126 to 136°C (258.8 to 276.8°F)		
Specific Gravity	0.91 to 0.97 (Water = 1)		
Volatility	Negligible.		
Solubility in Water	Insoluble in water.		

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable. Avoid temperatures above 300 degree C (570 F).
Incompatibility with Various Substances	May react or be incompatible with oxidizing materials.
Hazardous Decomposition Products	Hazardous decomposition products are carbon monoxide, carbon dioxide, dense smoke, and various hydrocarbons.
Hazardous Polymerization	No.

Section 11. Toxicological Information

Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Not listed as a carcinogen by OSHA, NTP or IARC.
Other Toxic Effects on Humans	Not considered to be dangerous to humans.



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	No additional information.

Section 13. Disposal Considerations

Waste Information Transfer to an approved disposal area in accordance with federal, state, and local regulations.
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.	
USCG Proper Shipping Name	Not Available	
Marine Pollutant	Not listed in Appendix B to 49CFR172.101	 No label required
Hazardous Substances Reportable Quantity	Not applicable	
Special Provisions for Transport	Not applicable.	
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	This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
U.S. Federal Regulations	<p>TSCA inventory: All the ingredients are on the TSCA list.</p> <p>SARA 301/302/303</p> <p>No chemicals in this product are listed as extremely hazardous substances in 40 CFR 355, Emergency Planning And Notification (Appendix A to Part 355).</p> <p>-----</p> <p>SARA 304</p> <p>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).</p> <p>-----</p> <p>SARA 313</p> <p>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).</p> <p>-----</p> <p>SARA 311/312</p> <p>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.</p> <p>-----</p> <p>Specific state and local regulations should be consulted to determine if there are any additional</p>

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requirements. Because many states and localities have added requirements or incorporated the Federal contents in their own forms, Tier I & II forms 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.

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 Toxic substances: This material is not listed.

Canadian ARET: This material is not listed.

Canadian NPRI: This material is not listed.

Alberta Designated Substances: This material is not listed.

Ontario Designated Substances: This material is not listed.

Quebec Designated Substances: This material is not listed.

DSCL (EEC) This product is not classified according to EU legislation.

International Lists Australia inventory (AICS): This material is listed or exempted.

Canada inventory: All the ingredients are on the DSL or NDSL.

China inventory (IECSC): This material is listed or exempted.

Japan inventory (ENCS): This material is listed or exempted.

Japan inventory (ISHL): Not determined.

Korea inventory (KECI): This material is listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.

Philippines inventory (PICCS): This material is listed or exempted.

State Regulations

Connecticut Carcinogen Reporting: This material is not listed.

Connecticut Hazardous Material Survey: This material is not listed.

Florida substances: This material is not listed.

Illinois Chemical Safety Act: This material is not listed.

Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.

Louisiana Reporting: This material is not listed.

Louisiana Spill: This material is not listed.

Massachusetts Spill: This material is not listed.

Massachusetts Substances: This material is not listed.

Michigan Critical Material: This material is not listed.

Minnesota Hazardous Substances: This material is not listed.

New Jersey Hazardous Substances: This material is not listed.

New Jersey Spill: This material is not listed.

New Jersey Toxic Catastrophe Prevention Act: This material is not listed.

New York Acutely Hazardous Substances: This material is not listed.

New York Toxic Chemical Release Reporting: This material is not listed.

Pennsylvania RTK Hazardous Substances: This material is not listed.

Rhode Island Hazardous Substances: This material is not listed.

California Prop. 65: There are no Proposition 65 chemicals present in our polyethylene 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 Chemtox Database
Hazardous Substance Database

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 Paul Bradley on 10/7/2009.**Verified by Karen Scheel.****Printed 10/7/2009.****Chemtrec:****(800) 424-9300****TOTAL PETROCHEMICALS USA, INC.:****(800) 322-3462****Notice to Reader**

To the best of our knowledge, the information contained herein is accurate. 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.

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To obtain an electronic copy of this MSDS, please email: product.stewardship@total.com.