

Material Safety Data Sheet



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1. COMPANY IDENTIFICATION

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| Company | Entec Polymers, LLC |
| Address | 1900 Summit Tower Blvd, Suite 900 Orlando, FL 32810 |
| Information Phone | (800) 375-5440 |
| Emergency Phone | (931) 728-7009 |
| Fax No. | (407) 875-5700 |
| Transportation | (888) 858-6966 |
| Effective Date | May 3, 2006 |
| Print Date | May 3, 2006 |

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| Product Name | Echo Polypropylene Copolymer RPPC 20/2 black, RPPC 20/6 black RPPC 20/10 black, RPPC 30/2 black |
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2. PRODUCT INFORMATION

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| Chemical Name: | Polypropylene Copolymer |
| CAS No.: | 9010-79-1 |
| Product Use: | May be used to produce molded or extruded articles or as a component of other industrial products. |

3. COMPOSITION AND INFORMATION ON INGREDIENTS

GENERAL DESCRIPTION OF CHEMICAL CHARACTER

Polypropylene copolymer; PP copolymer

HAZARDOUS INGREDIENTS

Not applicable

4. HAZARDOUS IDENTIFICATION

Emergency Overview:

- Pellets with slight or no odor
- Spilled material may create slipping hazard
- Can burn in a fire creating dense toxic smoke
- Molten plastic can cause severe thermal burns
- Fumes produced during melt process may cause eye, skin, and respiratory tract irritation. Severe over-exposure may result in nausea, headache, chills, and fever.
- Secondary operations such as grinding, sanding, or sawing can produce dust which may present an explosion or respiratory hazard

HMIS ratings: Health = 0; Flammability = 1; Reactivity = 0; PPE = B

Irritating vapors to respiratory system and eyes may form when polymer is processed at high temperatures. Molten material can cause burns on contact with skin. Use protective clothing, including face shield and chemical resistant gloves.

5. FIRST AID MEASURES

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| Eyes: | Remove contact lenses at once. Immediately flush eyes well with copious amounts of water or normal saline for at least 20-30 minutes. Seek medical attention. |
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| Skin: | Wash skin thoroughly with soap and water. Seek medical attention if rash or burns occur. |
| Ingestion: | No first aid procedures are needed. However, you should seek medical advice. |
| Inhalation: | Not likely to be inhaled due to physical form. |
| Melt Processing: | For molten plastic skin contact, cool rapidly with water and immediately seek medical attention. Do not attempt removal of plastic without medical assistance. Do not use solvent for removal. |

For processing fume inhalation irritation, leave contaminated area and breathe fresh air. If coughing, difficult breathing or any other symptoms develop, seek medical attention at once, even if symptoms develop at a later time.

For skin contact with fume condensate, immediately wash thoroughly with soap and water. If irritation develops, seek medical attention.

6. FIRE FIGHTING MEASURES

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| Fire Fighting: | Approved positive pressure demand breathing apparatus (SCBA) and protective clothing should be used for all fires. Water spray is the preferred extinguishing medium although dry chemicals, CO ₂ , halon or foam is also acceptable. |
| Extinguishing Media: | Water spray, CO ₂ , halon or foam. Water is the best extinguishing medium. Carbon dioxide and dry chemicals are not generally recommended because of their lack of cooling capacity, may permit re-ignition. |
| Hazardous Combustion Products: | Hazardous combustion products may include intense heat, dense black smoke, carbon monoxide and carbon dioxide. |
| Flash Points: | Not available |
| Lower Flammable Limit: | Not available |
| Upper Flammable Limit: | Not available |
| Conditions of flammability: | Requires a continuous flame source to ignite |
| Autoignition: | Not available |
| Hazardous Combustion Products: | Intense heat, smoke, carbon dioxide and carbon monoxide may result. |

7. ACCIDENTAL RELEASE MEASURES

Sweep or gather up material to minimize slipping hazard and place in proper container for disposal or recovery.

8. HANDLING AND STORAGE

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| Handling: | Prevent contact with skin and eyes. Use good industrial hygiene practices. Provide adequate ventilation. Secondary |
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operations such as grinding, sanding or sawing may produce a dust explosion hazard. Use bonding, grounding, venting and explosion relief provisions in accordance with accepted engineering practices. Processing improperly dried product may result in the production of Bisphenol A.

Storage: Store in a dry place away from moisture, excessive heat and sources of ignition. Avoid storage near foods to prevent food contamination.

9. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: A continuous supply of fresh air to the workplace together with removal of processing fumes through exhaust systems is recommended. Processing fume condensate may be a fire hazard and toxic; remove periodically from exhaust hoods, ductwork and other surfaces using appropriate personal protection.

Ventilation Requirements: Must be locally determined to limit exposure to materials at their point of use. Design techniques and guidelines may be found in publications such as: *Industrial Ventilation – available from the American Conference of Governmental Industrial Hygienists, Committee on Industrial Ventilation, P.O. Box 16153, Lansing, MI 48901*

Personal Protections:

Eye/Face: Wear Safety glasses with side shields or chemical goggles. In addition, use full-face shield when cleaning processing fume condensates from hoods, ducts and other surfaces.

Skin: When handling pellets, avoid prolonged or repeated contact with material. When melt processing product, wear long pants, long sleeves, insulated gloves and face shield when applicable. Use appropriate protective clothing, including chemical resistant gloves, to prevent any contact with processing fume condensates.

Respiratory: When processing fumes are not adequately controlled, use approved for protection from organic vapors and acid gases. When dust or powder from secondary operations, such as grinding, sanding or sawing is not adequately controlled, use respirator approved for protection from dust.

10. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State: Solid pellet
- Odor and Appearance: Plastic pellet with slight odor
- Boiling point: Not applicable
- Melting Point: 120 – 170 C (248 – 338F)
- Vapor Pressure (mmHg): Not available
- Vapor Density (air =1): Not available
- Specific Gravity: < 0.9 – 0.99
- Water Solubility: Insoluble
- % Volatiles: Negligible
- PH: Not applicable
- Odor Threshold: Not established
- Evaporation rate: Not available

11. STABILITY AND REACTIVITY

- Stability: Stable under recommended conditions of storage and handling. Avoid temperatures greater than 300 C (570 F).
- Reactivity: Not reactive under recommended conditions of storage and handling, processing and usage.
- Conditions to Avoid: Do not exceed melt temperature recommendations in product literature. In order to avoid Autoignition/hazardous decomposition of hot, thick masses of plastic, purging should be collected in small, flat shapes or thin strands to allow for rapid cooling and quench in water. Do not allow product to remain in barrel at elevated temperatures for extended periods of time; purge with a general purpose resin
- Hazardous Decomposition: Processing fumes evolved at recommended processing conditions may include trace levels of carbon monoxide and carbon dioxide.

12. TOXICOLOGICAL INFORMATION

- Eye: Product not considered primary eye irritant. When similar products, in finely divided form, were placed into the eyes of rabbits, slight transient redness or discharge occurred – consistent with the expected slightly abrasive nature of the resin particles.
- Skin: Product not considered primary skin irritant.
- Acute Oral: Not available.
- Acute Inhalation: Processing fumes from similar products are not considered toxic.

13. ECOLOGICAL INFORMATION

Not expected to present any significant ecological problems.

14. DISPOSAL INFORMATION

- RCRA Hazardous Waste: Product is not a RCRA hazardous waste
- Waste Disposal: Recycling is encouraged. Disposal in landfill or by incineration in accordance with federal, state and local requirements. Do not dump into any sewers, on the ground, or into any body of water.

15. TRANSPORTATION INFORMATION

Not a DOT controlled material in the United States.

16. REGULATORY INFORMATION

TSCA Status: This product complies with the Chemical Substance Inventory requirements of the US EPA Toxic Substances Control act (TSCA).

17. OTHER

THE ABOVE INFORMATION AND RECOMMENDATIONS ARE BELIEVED ACCURATE AND RELIABLE BECAUSE IT IS NOT POSSIBLE TO ANTICIPATE ALL CONDITIONS OF USE; ADDITIONAL SAFETY PRECAUTIONS MAY BE REQUIRED. ENTEC POLYMERS, LLC., MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS.

USER RESPONSIBILITY: EACH USER SHOULD READ AND UNDERSTAND THIS INFORMATION AND INCORPORATE IT INTO INDIVIDUAL SITE SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE HAZARD COMMUNICATION STANDARDS AND REGULATIONS.