



MATERIAL SAFETY DATA SHEET

PET CHIPS

1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Product Name

PET RESIN BOTTLE

Material Identification

Material Chemical Identification

Virgin polyester resin Copolyester of terephthalic acid, ethylene glycol, and isophthalic acid.

2. COMPOSITION/INFORMATION ON INGREDIENTS

| | |
|--------------------------------|-----------------------------------|
| Common name | : PET |
| Chemical characteristic | : Polyethylene Terephthalate |
| CAS registry no. | : 25038-59-9 TM |
| Ingredients | : 100% Polyethylene terephthalate |

3. HAZARDS IDENTIFICATION

Emergency Overview

This product, as shipped, is not considered hazardous as defined by the OSHA Hazard Communication Standard (29CFR 1910.1200).

Potential Health Effects:

Heating the polymer to the melt point, such as in extrusion, may release a small amount of acetaldehyde from degradation.

Burning the polymer may produce carbon monoxide and oxides of antimony. Carbon monoxide can cause carbon monoxide poisoning. Freshly produced antimony oxide can cause metal fume fever.

Carcinogenicity Information

None of the components in the polymer at greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

4. FIRST AID MEASURES

Inhalation: No specific treatment is necessary since polyester polymer is not likely to be hazardous by inhalation. If exposure results from burning the polymer, remove to fresh air and get medical attention if dizziness or nausea occurs.

Eyes: No specific treatment is necessary under normal situations.

Skin: No specific treatment is necessary. Polyester polymer is not irritating to the skin.

Ingestion: No specific treatment is necessary, as ingestion of the polymer is not likely.



5. FIRE FIGHTING MEASURES

Flammable Properties

- Flashpoint: Not applicable. Material will burn in a fire.
- Lower Explosive Limit: Not Applicable.
- Upper Explosive Limit: Not Applicable.
- Autoignition Temperature: Not available.
- Hazardous Combustion Products: Carbon monoxide, freshly produced antimony oxide.
- Unusual Fire and Explosion Hazards: Accumulation of dust could present a fire hazard.

Fire Fighting Media

Water spray or fog, CO₂, dry chemical or foam.

Fire Fighting Instructions

As in any fire, wear MSHA/NIOSH approved, pressure-demand, self-contained breathing apparatus and full protective bunker gear.

6. ACCIDENTAL RELEASE MEASURES

Safeguards

No protective measures required unless the polymer is involved in a fire. See section 5 if this is the case.

Spill Clean Up

Vacuum or sweep up material for salvage or disposal.

7. HANDLING AND STORAGE

No special requirements for handling or storage, other than to store away from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Ventilation: General ventilation is adequate to control acetaldehyde accumulation during extrusion operations. Local exhaust ventilation should be used to control levels of carbon monoxide and or antimony oxide during any operation that involve burning of the polymer.

Personal Protective Equipment

Eye Protection: Safety glasses, preferably with side shields, should be worn with normal handling.

Skin Protection: None should be needed.



Respiratory Protection: None should be needed during normal handling. An MSHA/NIOSH approved full-face respirator with organic vapor cartridge(s) and high efficiency particulate filter(s) or other appropriate respiratory protection should be worn when exposure is expected from operations involving the burning of polymer residues.

Exposure Limits:

OSHA PEL ACGIH TLV

Polymer not applicable not applicable

Acetaldehyde 100 ppm TWA 100 ppm TWA

150 ppm STEL 150 ppm STEL

Antimony oxide (as Sb) 0.5 ppm TWA 0.5 ppm TWA

Carbon monoxide 35 ppm TWA 50 ppm TWA

200 ppm CEIL 400 ppm TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

| | |
|---------------------|-----------------------------|
| Odor | : Odorless |
| Form | : Small cubes (chips) |
| Specific gravity | : (Water=1.0) 1.33-1.45 |
| Vapor Density | : Not applicable |
| Intrinsic Viscosity | : 0.75-0.84 (typical range) |
| Appearance | : Clear or white, smooth |
| pH | : Not applicable |
| Vapor Pressure | : Not applicable |
| Boiling Point | : Not applicable |
| Solubility in Water | : Insoluble |

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under normal temperatures and pressures.

Conditions to Avoid

Temperatures above approximately 440 deg F (225 deg C) will cause decomposition in the presence of oxygen.

Incompatibility with Other Materials

Can react with strong oxidizers, strong bases and strong acids.

Decomposition

Hazardous decomposition products: Carbon dioxide, carbon monoxide, oxides of antimony and aldehydes.

Polymerization

Polymerization will not occur.



11. TOXICOLOGICAL INFORMATION

Polyester polymer is non toxic.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Polyester polymer is non toxic. Polyester chip, however should be kept out of waterways as it could be ingested by wildlife and eventually fill the stomach of an animal.

Chemical Fate Information

Polyester polymer will not degrade biologically and will remain in place until cleaned up.

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Polyester polymer, as supplied, is not a RECRA hazardous waste. Chemical additions, processing or otherwise altering this material could, however, change this status. State and local regulations should be reviewed prior to disposal.

14. TRANSPORTATION INFORMATION

Shipping Information

Department of Transportation (DOT): Not regulated
International Civil Aviation Organization (ICAO) Classification: Not regulated
International Maritime Dangerous Goods (IMDG) Classification: Not regulated
TDG Class (Canada): Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

- Non-hazardous chemical according to OSHA Regulation 29 CFR 1910.1200
- Toxic Substances Control Act (TSCA): All components listed on inventory.
- Subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: No
- SARA Sections 311 and 312 hazard classification: None



16. OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Ratings:

Health : 1

Flammability : 1

Reactivity : 0

NPCA-HMIS Ratings

Health : 0

Flammability : 0

Reactivity : 0

Notice: NFPA and MHIS ratings involve data and interpretations that may vary from company to company and are intended only for rapid, general identification of the magnitude of the specific hazard.

To deal adequately with the safe handling of this material, all information contained in this MSDS must be considered.

To the best of our knowledge, the information contained herein is accurate. However, Wankai New Material Co., Ltd. assumes no 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 which exist.