

**EVERGREEN PLASTICS, LTD.**  
**202 Watertower Drive Clyde, Ohio 43410**

Material Safety Data Sheet

Date: 09/10/08 Rev: B

## Recycled PET (Polyethylene Terephthalate)

### **Emergency Contact**

(Product Information) Evergreen Plastics: 1-419-547-1400

### **Product Identification**

Polyester Bottle Resin, also known as PET, is made from a copolymer of polyethylene terephthalate and isophthalic acid.

### **Hazardous Ingredients**

There are no known physical or health hazards associated with this product. The polymer immobilizes the constituents of the polymer system, which therefore present no likelihood of exposure under normal conditions of processing and handling.

However, exposure to chemical substances may occur as a result of processing this polymer. Molten polymer or prolonged air-drying of polymer at temperatures above 195° c will release small quantities of acetaldehyde (CAS# 75-07-0). Established exposure limits for acetaldehyde is:

25(ppm) from ACGIH (TLV) (United States)  
200 STEL: 150 (ppm) from OSHA (PEL)(United States)  
360 STEL: 270 (mg/m3) from OSHA (PEL)(United States)  
Consult local authorities for acceptable exposure limits

### **Physical-Chemical Data**

Polyester Bottle Resin may be in the form of pellets or flake. It is heavier than water with a specific gravity ranging between 1.33 to 1.45. Intrinsic viscosities may range between 0.70 to 0.90 dl/gm.

The polymer is chemically stable and resistant to attack by oils, solvents, weak acids, and weak alkalis. It melts at about 482° F (250°C).

### **Physical Hazards**

Polyethylene terephthalate could burn if exposed to flame. Molten polymer generates small amounts of volatile degradation products (off-gases), one of which is acetaldehyde. Acetaldehyde vapors form explosive mixtures with air, which can spontaneously ignite (auto ignite) at temperatures above 347°F (175°C). Combustion products will be comprised of compounds of carbon, hydrogen, and oxygen. The exact composition will depend on the conditions of combustion. (See Control Measures and Safe Handling Procedures.)

## **Health Hazard Data**

No adverse health effects have been attributed to Polyester Bottle Resin. Acetaldehyde vapors, which are released in small quantities from molten resin, are potent irritants. Acetaldehyde is mutagenic in vitro test systems and has been classified by IARC as an experimental animal carcinogen and a possible human carcinogen.

## **Control Measures Safe Handling Procedures**

Fire fighters should protect themselves from decomposition and combustion products that may include carbon monoxide and other toxic gases. The recommended fire fighting procedure is to use Class A or Class B fire extinguishers or water fog.

Fume removal equipment should be used with high temperature processes such as extruding, melting or drying. Accumulation of resin on hot machine surfaces should be avoided to minimize the possible generation of volatile decomposition products that may be irritating, toxic and combustible. Acetaldehyde is the principal decomposition product generated during extruding, melting or drying.

Skin contact with molten polymer should be avoided as burns can result. If contact occurs, the affected area should be flushed with plenty of cold water. Prompt medical attention is advised for burns.

Stepping or walking on resin chips or pellets can cause falls; avoid accumulation of floors and walkways.

Operations involving grinding or machining of resin should be reviewed to assure that particulate levels are kept below recommended exposure limits:

ACGIH TLV (nuisance/inert dust): 10 mg/m<sup>3</sup> (total); 3 mg/m<sup>3</sup> (respirable)

OSHA PEL (nuisance particulates): 15 mg/m<sup>3</sup> (total); 5 mg/m<sup>3</sup> (respirable)

## **Disposal and Shipping Information**

Polyester Bottle Resin is not classified as a hazardous waste under the Resource Conservation and Recovery Act and, unless prohibited by state or local regulation, can be disposed of in a municipal landfill or incinerated. This product is not classified by the Department of Transportation as a hazardous material.

## **Information Contact**

Evergreen Plastics, Ltd.  
Attention: Safety Manager  
202 Watertower Drive  
Clyde, Ohio 43410  
Phone: (419) 547-1400

Note: The information provided herein has been copied from an original manufacturer of PET material and is accurate to the best of our knowledge. Evergreen Plastics is a recycler of PET resin and is not an original manufacturer of PET material.

To the best of our knowledge, the information contained herein is accurate. However, Evergreen does not assume 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, which exist.