

Technical Information

ELVALOY™ PTW

Copolymer

Description			
Product Description	ELVALOY™ PTW is an ethylene terpolymer, used as an Impact Modifier for a variety of polymers.		
Restrictions			
Material Status	Commercial: Active		
Typical Characteristics			
Uses	Polymer Modifier		
Characteristics / Benefits	General purpose toughener for a variety of polymers. Promotes toughening of PET.		
Applications	When used in a CPET tray formulation, ELVALOY™ PTW provides both toughening and increases the melt strength of the PET.		
Typical Properties			
Physical	Nominal Values		Test Method(s)
*Density ()	0.94 g/cm³	ASTM D792	ISO 1183
*Melt Flow Rate (190°C/2.16kg)	12 g/10 min	ASTM D1238	ISO 1133
Thermal	Nominal Values		Test Method(s)
*Melting Point(DSC)	72 °C (161.6 °F)	ASTM D3417	ISO 3146
Processing Information			
*Maximum Processing Temperature	310 °C (590 °F)		
General Processing Information	Optimizing Use Level: This material is an ethylene terpolymer that is most effective when it is well dispersed into a polymer. The single screw or twin-screw extrusion equipment used to melt and pump the molten polymer provides the dispersive mixing. Increasing the loading of the ethylene terpolymer in the polymer makes it more difficult to develop the required degree of dispersion. The best improvement in cold temperature impact resistance may occur at an intermediate loading in the case where the extrusion equipment has limited mixing capabilities. On single screw extruders, increasing the screw speed has been found to improve the quality of the dispersion and observed tray toughness. Handling/Storage of Concentrate: ELVALOY™ PTW is supplied in polyethylene bag lined boxes or bags. The product does not require drying but the material should be handled in a way that minimizes moisture pick-up. For example reseal bags or box liners when partial bags or boxes are not being used. Feeding Extruder: The melting point of the ELVALOY™ PTW is 72°C (162°F) so a split feed single screw extrusion feed hopper will be required in cases where the temperature of a hot dried polymer such as PET exceeds the melting point of the ELVALOY™ PTW.		

FDA Status Information

ELVALOY™ PTW Resin Modifier may be used at up to a level of 7 percent in crystallized polyethylene terephthalate (CPET) trays that will hold food for microwave and conventional oven heating. Such use may be properly said to comply fully with the Federal Food, Drug, and Cosmetic Act and all applicable food additive regulations.

ELVALOY™ PTW Resin Modifier may be used at up to a level of 3 percent in amorphous polyethylene terephthalate (APET) trays that will hold food under Conditions of Use E and F (room temperature and refrigerated storage with no thermal treatment in the container). Such use may be properly said to comply fully with the Federal Food, Drug, and Cosmetic Act and all applicable food additive regulations.

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Regulatory Information

For information on regulatory compliance outside of the U.S.A., consult your local Dow representative.

Articles made with PET or other thermoplastics modified with small amounts of ELVALOY™ PTW should be tested to confirm they comply with applicable food contact regulations in your region.

Safety & Handling

For information on appropriate Handling & Storage of this polymeric resin, please refer to the material Safety Data Sheet.

A Product Safety Bulletin, material Safety Data Sheet, and/or more detailed information on extrusion processing and/or compounding of this polymeric resin for specific applications are available from your Dow representative.

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- use in cardiac prosthetic devices regardless of the length of time involved ("cardiac prosthetic devices" include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems, and ventricular bypass-assisted devices);
- use as a critical component in medical devices that support or sustain human life; or
- use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.

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