



Dow Packaging & Specialty Plastics

Product Data Sheet

ELVALOY™ PTW

Copolymer

General Information

Product Description ELVALOY™ PTW is an ethylene terpolymer, used as an Impact Modifier for a variety of polymers.

Status

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/cm ³	ASTM D792	ISO 1183
*Melt Flow Index (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 complies with Food and Drug Administration Regulation 21 CFR 175.105 - - Adhesives. This Regulation describes adhesives that may be used as components of articles intended for use in packaging, transporting, or holding food, subject to the limitations and requirements therein.

Additionally, with respect to Food and Drug Administration (FDA) Food Contact Regulations;

ELVALOY™ PTW Resin Modifier complies with this regulation for direct food contact applications, with limitation(s);

* Use at a maximum level of 7% in crystallized polyethylene terephthalate (CPET) trays that will hold food for microwave and conventional oven uses.

* Use at a maximum level of 3% in amorphous polyethylene terephthalate (APET) trays that will hold food under refrigerated conditions.

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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.

Product Stewardship

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Additional details of Dow's Medical Applications Policy are available at:

<https://www.dow.com/en-us/support/product-safety.html>

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Harmful Applications Policy

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http://www.dow.com/products_services

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P&SP Disclaimer

Additional Information

To contact Dow via Toll-Free or Local Toll phone numbers in specific countries, please see the following webpage:

<https://www.dow.com/en-us/support/contact-representative.html>

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