Technical Information

ELVAX™ 3165

Ethylene Vinyl Acetate Copolymer

Description

Product Description

ELVAX™ 3165 is an extrudable ethylene-vinyl acetate copolymer resin available in pellet form for use in conventional extrusion equipment designed to process polyethylene resins.

Restrictions

Material Status

Commercial: Active

Typical Characteristics

Composition

18% By Weight Vinyl Acetate comonomer content
Thermal Stabilizer: BHT antioxidant

Applications

This resin is designed to provide a low temperature heat seal to itself or many other materials commonly used in flexible packaging applications. The melt properties of this resin allow it to be processed on blown film equipment over a wide range of film thickness and blow-up ratios. It can also be co-extruded with a variety of other polymers. This resin is typically used as low temperature seal layer in co-extruded films.

Typical Properties

Physical	Nominal Values		Test Method(s)	
*Density ( )	0.94 g/cm³	ASTM D792		ISO 1183
*Melt Flow Rate (190°C/2.16kg)	0.7 g/10 min	ASTM D1238		ISO 1133
Thermal	**Nominal Values**		**Test Method(s)**	
*Melting Point (DSC)	89 °C (192.2 °F)	ASTM D3418		ISO 3146
Freezing Point (DSC)	68 °C (154.4 °F)	ASTM D3418		
Vicat Softening Point ( )	69 °C (156.2 °F)	ASTM D1525		ISO 306

Processing Information

***Maximum Processing Temperature**

235 °C (455 °F)

General Processing Information

Resin melt temperature should be maintained in the range of 160-185°C (320-365°F) to provide a suitable viscosity and melt strength for blown film extrusion. Higher temperatures may be more appropriate for coextrusion with other grades. Selection of a specific melt temperature will depend on considerations such as desired gauge, height of tower, cooling capacity, extruder hold up time, winding conditions, and other machine variables.

ELVAX™ can be used in conventional extrusion equipment designed to process polyethylene resins. However, corrosion-protected barrels, screws, adapters, and dies are recommended, since, at sustained melt temperatures above 455°F (235°C), ethylene vinyl acetate (EVA) resins may thermally degrade and release corrosive by-products.

FDA Status Information

ELVAX™ 3165 resin complies with Food and Drug Administration Regulation 21 CFR 177.1350(a)(1) - - Ethylene-vinyl acetate copolymers, subject to the limitations and requirements therein. This Regulation describes polymers that may be used in contact with food, subject to the finished food-contact article meeting the extractive limitations under the intended conditions of use, as shown in paragraph (b)(1) of the Regulation.

	The information and certifications provided herein are based on data we believe to be reliable, to the best of our knowledge. The information and certifications apply only to the specific material designated herein as sold by Dow and do not apply to use in any process or in combination with any other material. They are provided at the request of and without charge to our customers. Accordingly, Dow cannot guarantee or warrant such certifications or information and assumes no liability for their use.
Regulatory Information	**For information on regulatory compliance outside of the U.S.A., consult your local Dow representative.**
Safety & Handling	**THE IMPORTANCE OF PROPER HANDLING & STORAGE:** **Maintaining proper handling and storage conditions for ELVAX™ resins is very important to ensure overall product quality and keep the resin in a free-flowing state. If the ELVAX™ resin is subjected to sunlight, rain or excessive temperatures, then the resin may not process properly or achieve the desired characteristics in the final product.** **It is crucial for ELVAX™ resins to be kept under proper storage and handling conditions because improper storage and handling may cause the resin to "block" (massing of pellets into large clumps that can hinder the ease of material transfer) or lose the ability to flow freely.** **Please refer to the ELVAX™ Handling Guide for additional information.** **For additional 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

The Dow Chemical Company and its subsidiaries ("Dow") has a fundamental concern for all who make, distribute,and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our Product Stewardship program rests with each and every individual involved with Dow products – from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

Medical Applications Policy

NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS: Dow will not knowingly sell or sample any product or service ("Product") into any commercial or developmental application that is intended for:
a. long-term or permanent contact with internal bodily fluids or tissues. "Long-term" is contact which exceeds 72 continuous hours (or for PELLETHANE™ Polyurethane Elastomers only, which exceeds 30 days);
b. 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);
c. use as a critical component in medical devices that support or sustain human life; or
d. use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.

Dow requests that customers considering use of Dow products in medical applications notify Dow so that appropriate assessments may be conducted.

Dow does not endorse or claim suitability of its products for specific medical applications. It is the responsibility of the medical device or pharmaceutical manufacturer to determine that the Dow product is safe, lawful, and technically suitable for the intended use. DOW MAKES NO WARRANTIES, EXPRESS

OR IMPLIED, CONCERNING THE SUITABILITY OF ANY DOW PRODUCT FOR USE IN MEDICAL APPLICATIONS.

Disclaimer

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, the Customer is responsible for determining whether products and the information in this document are appropriate for the Customer's use and for ensuring that the Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Dow assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

NOTICE: If products are described as "experimental" or "developmental": (1) product specifications may not be fully determined; (2) analysis of hazards and caution in handling and use are required; (3) there is greater potential for Dow to change specifications and/or discontinue production; and (4) although Dow may from time to time provide samples of such products, Dow is not obligated to supply or otherwise commercialize such products for any use or application whatsoever.

Published August 2019