DuPont Packaging & Industrial Polymers

DuPont™ Appeel® 45D747

Appeel® resins Product Data Sheet

Description

Product Description	Appeel® 45D747 is a modified polyolefin resin designed to provide easy peel functionality from ethylene copolymers. Appeel® 45D747 is available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polyethylene resins.

Restrictions

Material Status	• Developmental: Active

Typical Characteristics

Characteristics / Benefits	Peelability from ethylene copolymers.

Typical Properties

Physical	Nominal Values	Test Method(s)	
* Density ()	0.914 g/cm³	ASTM D792	ISO 1183
* Melt Flow Rate (190°C/2.16kg)	4.2 g/10 min	ASTM D1238	IS0 1133

Thermal	Nominal Values	Test Method(s)	
* Melting Point (DSC)	112°C (234°F)	ASTM D3418	ISO 3146
Vicat Softening Point ()	95°C (203°F)	ASTM D1525	ISO 306

Heat Seal Evaluation

The performance of any sealant resin should be evaluated within the context of the application. The sealant is designed to bond to particular substrate(s). Many variables can affect seal strength, including the physical properties of the substrate being sealed to, thickness, flange or surface design, heat seal temperature, dwell time and pressure. The condition and type of the sealing equipment used, such as roller sealers versus platen seal mechanisms can make a significant difference.

In most cases sealant peel strength is used as a measure of performance. Although this is a convenient test, peel strength is affected not only by substrate adhesion but also by peel angle, separation rate, ambient temperature, tensile and modulus properties of the materials, and often by the time elapsed since the formation of the bond.

If sealant peel strength is used as a measure of sealant performance, it is imperative that peel strength be evaluated not only at the time of initial heat sealing the lid to the substrate, but throughout the life of the product and under all the conditions to which the sealant will be exposed. Only then does peel strength provide a reliable indication of adhesive performance in the specific application.

Processing Information

General	
* Maximum Processing Temperature	315°C (599°F)
General Processing Information	Selection of a specific melt temperature will depend on screw configuration, potential power limitations, and the need to match melt viscosities. However, melt temperatures above 315C (599F) should be avoided because of possible thermal degradation of the resin.

Blown Film Processing	Nominal Values
Blown Film Processing Information	The melt temperature of Appeel® 45D747 should be maintained in the 170 C - 195C (338 F - 383 F) range for blown film.
Feed Zone	140°C (284°F)
Second Zone	150°C (302°F)
Third Zone	170°C (338°F)
Fourth Zone	195°C (383°F)
Fifth Zone	195°C (383°F)
Adapter Zone	195°C (383°F)
Die Zone	195°C (383°F)

Extrusion Coating/Lamination Processing	Nominal Values
Extrusion Coating / Lamination Processing	The melt temperature of Appeel® 45D747 should be maintained in the 260 - 305C (356 - 581F) range for extrusion coating.
Feed Zone	180°C (356°F)
Second Zone	210°C (410°F)
Third Zone	260°C (500°F)
Fourth Zone	285°C (545°F)
Fifth Zone	285°C (545°F)
Adapter Zone	285°C (545°F)
Die Zone	285°C (545°F)

FDA Status Information	Appeel® 45D747 resin complies with Food and Drug Administration Regulation 21 CFR 177.1520 - - covering it's use in direct contact with all types of food subject to the extractives limitations on the finished food contact article as described in 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 DuPont 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, DuPont cannot guarantee or warrant such certifications or information and assumes no liability for their use.
Regulatory Information	In Europe a diversity of regulations apply in various countries. In addition, constant changes linked to the effort of their harmonization under the umbrella of European Union Directive can be observed. This makes it impossible to accurately describe the food contact status in this brochure. Updated statements describing the situation in the various European countries can be obtained through your local sales representative.
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 DuPont Packaging and Industrial Polymers representative.

Read and Understand the Material Safety Data Sheet (MSDS) before using this product

Regional Centres

DuPont operates in more than 70 countries. For help finding a local representative, please contact one of the following regional customer contact centers:

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This data sheet is effective as of 08/07/2010 02:11:00 PM and supersedes all previous versions.