

DuPont™ Appeel® 11D542

Appeel® resins Product Data Sheet

Description

| | |
|---------------------|---|
| Product Description | DuPont™ Appeel® 11D542 is a modified ethylene vinyl acetate copolymer resin designed to function as a sealing layer for lidding applications. It is most often suggested to provide interfacial peel seals film to film, and occasionally for peel seal from HDPE, LLDPE, or low %EVA films. It is available in pellet form for use in conventional extrusion or coextrusion equipment designed to process polyethylene resins. |
|---------------------|---|

Restrictions

| | |
|-----------------|---|
| Material Status | <ul style="list-style-type: none"> • Developmental: Active |
|-----------------|---|

Typical Characteristics

| | |
|----------------------------|--|
| Characteristics / Benefits | Cohesive type peel seal. |
| Applications | Interfacial Peel Seal for pouches, Peelable Lidding film to other polyolefin substrates, |

Typical Properties

| Physical | Nominal Values | Test Method(s) | |
|-------------------------------|------------------------|----------------|----------|
| Density () | 0.93 g/cm ³ | ASTM D792 | ISO 1183 |
| Melt Flow Rate (190°C/2.16kg) | 2 g/10 min | ASTM D1238 | ISO 1133 |

| Thermal | Nominal Values | Test Method(s) | |
|---------------------------|----------------|----------------|----------|
| Melting Point (DSC) | 101°C (214°F) | ASTM D3418 | ISO 3146 |
| Vicat Softening Point () | 85°C (185°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 | 235°C (455°F) |
| General Processing Information | <p>If the process is stopped for short periods of time, the screw for the Appeel® extruder should be kept turning at a low rpm to keep material flowing.</p> <p>After processing Appeel®, purge the material out using a polyethylene resin, preferably with a lower melt flow rate than the Appeel® resin in use. The "Disco Purge Method" is suggested as the preferred purging method, as this method usually results in a more effective purging process. Information on the Disco Purge Method can be obtained via your DuPont Sales Representative.</p> <p>Never shut down the extrusion system with Appeel® in the extruder and die. Properly purge out the Appeel® with a polyethylene, and shut down the line with polyethylene or polypropylene in the system.</p> |

Blown Film Processing

Nominal Values

| | |
|-----------------------------------|--|
| Blown Film Processing Information | A suggested initial extruder temperature profile |
| Feed Zone | 135°C (275°F) |
| Second Zone | 160°C (320°F) |
| Third Zone | 185°C (365°F) |
| Fourth Zone | 185°C (365°F) |
| Fifth Zone | 185°C (365°F) |
| Adapter Zone | 185°C (365°F) |
| Die Zone | 185°C (365°F) |

FDA Status Information

Appeel® 11D542 resin complies with Food and Drug Administration Regulation 21 CFR 177.1350 -- 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.

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

As with any hot material, care should be taken to protect the hands and other exposed parts of the body when working with molten polymer. At temperature ranges above 238°C (460°F), this resin can evolve low concentrations of fumes. When resins are overheated, more extensive decomposition may occur. Adequate local ventilation should be provided to remove the fumes from the work area. Disposal of scrap presents no special problems and can be by landfill or incineration in a properly operated incinerator. Disposal should comply with local, state, and federal regulations. Resin pellets can be a slipping hazard. Loose pellets should be swept up promptly to prevent falls. For more detailed information on the safe handling and disposal of resins, a Product Safety Bulletin and OSHA Material Safety Data Sheet can be obtained from the regional office serving you.

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:

Americas

DuPont Company, BMP26-2363
Lancaster Pike & Route 141
Wilmington, DE 19805 U.S.A.
Telephone +1 302-774-1161
Toll-free (USA) 800-628-6208
Fax +1 302-999-4399

DuPont do Brasil, S.A.
Alameda Itapecuru, 506
06454-080 Barueri, SP Brasil
Telephone +55 11 4166 8122
Fax +55 11 4166 8720

Asia Pacific

DuPont China Holding Co., Ltd.
Shanghai Branch
399 Keyuan Road, Bldg. 11
Zhangjiang Hi-Tech Park
Pudong New District, Shanghai
P.R. China (Postcode: 201203)
Telephone +86 21 3862 2888
Fax +86-21-3862-2889

Europe / Middle East / Africa

DuPont de Nemours Int'l. S.A.
2,Chemin du Pavillon Box 50
CH-1218 Le Grand Saconnex
Geneva, Switzerland
Telephone +41 22 717 51 11
Fax +41 22 717 55 00

<http://appeel.dupont.com>

The data listed here fall within the normal range of properties, but they should not be used to establish specification limits nor used alone as the basis of design. The DuPont Company assumes no obligations or liability for any advice furnished or for any results obtained with respect to this information. All such advice is given and accepted at the buyer's risk. The disclosure of information herein is not a licence to operate under, or a recommendation to infringe, any patent of DuPont or others. Since DuPont cannot anticipate all variations in actual end-use conditions, DuPont makes no warranties and assumes no liability in connection with any use of this information.

CAUTION: Do not use DuPont materials in medical applications involving implantations in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of DuPont POLICY Regarding Medical Applications H-50103-3 and DuPont CAUTION Regarding Medical Applications H-50102-3.

Copyright © 2009 DuPont. The DuPont Oval Logo, DuPont™, The miracles of science™, and trademarks designated with "®" are registered trademarks or trademarks of E.I. du Pont de Nemours and Company or its affiliates. All rights reserved.

This data sheet is effective as of 08/28/2009 11:30:50 AM and supersedes all previous versions.