

DuPont™ Appeel® 11D888

Appeel® resins Product Data Sheet

**Description**

Product Description

Appeel®11D888 is a developmental modified ethylene vinyl acetate resin designed to function as a sealing layer for lidding applications. It is most often suggested to provide peelable seals over a broad temperature range to containers constructed of PP, PS & PET. Appeel® 11D888 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**

Uses

- Lidding Sealant

Characteristics / Benefits

Appeel® 11D888 provides low temperature heat seal initiation and easy peel characteristics to a variety of substrates.

Applications

Lidding sealant providing easy opening.

**Typical Properties**

**Physical**

Density ( )

**Nominal Values**

0.94 g/cm<sup>3</sup>

**Test Method (s)**

ASTM D792

ISO 1183

Melt Flow Rate (190°C/2.16kg)

32 g/10 min

ASTM D1238

ISO 1133

**Thermal**

Melting Point (DSC)

71°C (160°F)

ASTM D3418

ISO 3146

Vicat Softening Point ( )

55°C (131°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)

## Extrusion Coating /Lamination Processing

### Nominal Values

#### Extrusion Processing Information

Extrusion Coating: The melt temperature of Appeel® 11D888 should be maintained in the 210°- 235°C (410°- 455°F) range in extrusion coating processes. 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 235°C (455°F) should be avoided because of possible thermal degradation of the resin.

After processing Appeel®, purge the materials out using a polyethylene resin, preferably with a lower melt flow rate than the Appeel® resin in use, and at the temperatures used to process this resin.

Do not raise the extrusion system temperatures above these settings until all the Appeel® resin is fully purged.

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.

Never shut down the extrusion system with Appeel® in the extruder and die. Properly purge out the Appeel® with polyethylene, and shut down the line with polyethylene or polypropylene in the system.

Following is a suggestion for an initial processing profile for Appeel®11D888. The processing parameters can then be tailored to your extrusion needs. But avoid melt conditions hotter than 235C.

Feed Zone	140°C (284°F)
Second Zone	190°C (374°F)
Third Zone	210°C (410°F)
Fourth Zone	220°C (428°F)
Fifth Zone	220°C (428°F)
Adapter Zone	220°C (428°F)
Die Zone	220°C (428°F)

## FDA Status Information

Appeel® 11D888 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

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 polymers.

At temperature ranges above 230°C (446°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. Pellets of resins can be a slipping hazard. Loose pellets should be swept up promptly to prevent falls.

For more detailed information of the safe handling and disposal of the resin, a Product Safety Bulletin and OSHA Material Safety Data Sheet (MSDS No. Appeel®11D888) can be obtained from the DuPont 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

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