



## APPEEL™ 20D752

## Peelable Resin

## General Information

**Product Description** APPEEL™ 20D752 is a modified ethylene acrylate copolymer 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 a number of container materials including PS and PP. APPEEL™ 20D752 offers good peelability to PE, and also can be used to seal to itself resulting in a cohesive peel system. APPEEL™ 20D752 is available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polyethylene resins.

## Status

**Material Status** Commercial: Active

## Typical Characteristics

**Uses** Lidding Sealant

## Typical Properties

| Physical                         | Nominal Values         | Test Method(s) |          |
|----------------------------------|------------------------|----------------|----------|
| *Density ( )                     | 0.98 g/cm <sup>3</sup> | ASTM D792      | ISO 1183 |
| *Melt Flow Index ( 190°C/2.16kg) | 4.0 g/10 min           | ASTM D1238     | ISO 1133 |
| Thermal                          | Nominal Values         | Test Method(s) |          |
| *Melting Point( DSC)             | 90 °C ( 194 °F )       | ASTM D3418     | ISO 3146 |
| Vicat Softening Point ( )        | 68 °C ( 154.4 °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

\*Maximum Processing Temperature 260 °C ( 500 °F )

**General Processing Information** 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.

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 Dow Sales Representative.



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.

**Blown Film**

**Nominal Values**

**Processing Information**

**Blown Film:** In blown film coextrusion processes the temperature of the APPEEL™ 20D752 should be maintained in the 160 - 185° C range. It is also important that the APPEEL™ 20D752 be supported with materials having sufficient melt strength.

Following is an example of a suggested temperature profile for blown film processing. Adjustments would then be made to suit the individual process and applications needs.

|              |                   |
|--------------|-------------------|
| Feed Zone    | 140 °C ( 284 °F ) |
| Second Zone  | 150 °C ( 302 °F ) |
| Third Zone   | 160 °C ( 320 °F ) |
| Fourth Zone  | 180 °C ( 356 °F ) |
| Fifth Zone   | 180 °C ( 356 °F ) |
| Adapter Zone | 180 °C ( 356 °F ) |
| Die Zone     | 170 °C ( 338 °F ) |

**FDA Status Information**

APPEEL™ 20D752 resin complies with Food and Drug Administration Regulation 21 CFR 177.1340 - - Ethylene-methyl acrylate copolymer resins, 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) 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.

