



## Bynel® 2002

DuPont Packaging & Industrial Polymers - Ethylene Acrylic Acid Copolymer

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### General Information

#### Product Description

BYNEL® Series 2000 resins are acid modified ethylene acrylate resins. They contain a temperature stable ester which makes them functional in high temperature coextrusions. They are available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polyethylene (PE) resins.

#### Applications

BYNEL 2000 series resins adhere to a wide variety of materials. They are most often used to adhere to PE, EVA, Polyamide, ionomer, paper, aluminum foil, and printed films.

BYNEL 2002 is designed for low melt temperature extrusion or coextrusion coating / laminating applications.

#### General

|                   |                                          |                             |                 |
|-------------------|------------------------------------------|-----------------------------|-----------------|
| Material Status   | • Commercial: Active                     |                             |                 |
| Availability      | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Agency Ratings    | • FDA 21 CFR 177.1330(b)                 |                             |                 |
| Forms             | • Pellets                                |                             |                 |
| Processing Method | • Coextrusion                            | • Extrusion                 |                 |

### ASTM & ISO Properties <sup>1</sup>

| Physical                                  | Nominal Value | Unit              | Test Method |
|-------------------------------------------|---------------|-------------------|-------------|
| Density / Specific Gravity                | 0.932         |                   | ASTM D792   |
| Density                                   | 0.930         | g/cm <sup>3</sup> | ISO 1183    |
| Melt Mass-Flow Rate (190°C/2.16 kg)       | 10            | g/10 min          | ASTM D1238  |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 10            | g/10 min          | ISO 1133    |
| Thermal                                   | Nominal Value | Unit              | Test Method |
| Vicat Softening Temperature               | 140           | °F                | ASTM D1525  |
| Vicat Softening Temperature               | 140           | °F                | ISO 306     |
| Peak Melting Temperature                  | 196           | °F                | ASTM D3418  |
| Melting Temperature (DSC)                 | 196           | °F                | ISO 3146    |
| Freezing Point                            |               |                   |             |
| --                                        | 151           | °F                | ASTM D3418  |
| --                                        | 151           | °F                | ISO 3146    |

### Processing Information

| Extrusion             | Nominal Value | Unit |
|-----------------------|---------------|------|
| Cylinder Zone 1 Temp. | 275           | °F   |
| Cylinder Zone 2 Temp. | 365           | °F   |
| Cylinder Zone 3 Temp. | 455           | °F   |
| Cylinder Zone 4 Temp. | 500           | °F   |
| Cylinder Zone 5 Temp. | 500           | °F   |
| Adapter Temperature   | 500           | °F   |
| Melt Temperature      | < 545         | °F   |
| Die Temperature       | 500           | °F   |

#### Extrusion Notes

Processing conditions shown are for extrusion coating/lamination.

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### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.