

# DOW™ Butene 1220P

Polyethylene Resin

The Dow Chemical Company

## Message:

Polyethylene 1220P is a butene Linear Low Density Polyethylene for general blown film extrusion film applications.

Main Characteristics:

Used in Industrial, Food & Specialty Packaging

Better optics and processability

Better color stability

Complies with:

U.S. FDA 21 177.1520 (c) 3.2a

EU. No 10/2011

Consult the regulations for complete details.

| General Information                       |                              |          |                 |
|-------------------------------------------|------------------------------|----------|-----------------|
| Additive                                  | Anti-caking agent (2000 ppm) |          |                 |
|                                           | Sliding agent (1200 ppm)     |          |                 |
| Agency Ratings                            | FDA 21 CFR 177.1520(c) 3.2a  |          |                 |
|                                           | Europe No 10/2011            |          |                 |
| Forms                                     | Particle                     |          |                 |
| Physical                                  | Nominal Value                | Unit     | Test Method     |
| Specific Gravity                          | 0.919                        | g/cm³    | ASTM D792       |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 2.0                          | g/10 min | ASTM D1238      |
| Films                                     | Nominal Value                | Unit     | Test Method     |
| Film Thickness - Tested                   | 38                           | µm       |                 |
| Film Puncture Resistance (38 µm)          | 5.00                         | J/cm³    | Internal method |
| secant modulus                            |                              |          | ASTM D882       |
| 2% secant, MD: 38 µm                      | 150                          | MPa      | ASTM D882       |
| 2% secant, TD: 38 µm                      | 145                          | MPa      | ASTM D882       |
| Tensile Strength                          |                              |          | ASTM D882       |
| MD: Yield, 38 µm                          | 10.0                         | MPa      | ASTM D882       |
| TD: Yield, 38 µm                          | 10.0                         | MPa      | ASTM D882       |
| MD: Fracture, 38 µm                       | 33.0                         | MPa      | ASTM D882       |
| TD: Fracture, 38 µm                       | 25.0                         | MPa      | ASTM D882       |
| Tensile Elongation                        |                              |          | ASTM D882       |
| MD: Fracture, 38 µm                       | 950                          | %        | ASTM D882       |
| TD: Fracture, 38 µm                       | 1100                         | %        | ASTM D882       |
| Dart Drop Impact (38 µm)                  | 140                          | g        | ASTM D1709A     |
| Elmendorf Tear Strength                   |                              |          | ASTM D1922      |
| MD : 38 µm                                | 220                          | g        | ASTM D1922      |

| TD : 38 μm                  | 330           | g    | ASTM D1922      |
|-----------------------------|---------------|------|-----------------|
| Thermal                     | Nominal Value | Unit | Test Method     |
| Vicat Softening Temperature | 96.7          | °C   | ASTM D1525      |
| Melting Temperature (DSC)   | 116           | °C   | Internal method |
| Optical                     | Nominal Value | Unit | Test Method     |
| Gloss (45°, 38.1 μm)        | 53            |      | ASTM D2457      |
| Haze (38.1 μm)              | 13            | %    | ASTM D1003      |
| Extrusion instructions      |               |      |                 |

Fabrication Conditions For Blown Film:

Melt Temperature: 428°F (206°C)

Die Gap: 70mil (1.8mm)

Output: 120 lb/hr (54kg/fr)

Blow-Up Ratio: 2.5:1

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