# DOW™ LDPE 993I

## The Dow Chemical Company - Low Density Polyethylene Resin

Tuesday, November 5, 2019

## General Information

**Product Description**

- Low Density Polyethylene (LDPE)
- Typical applications include toys, lids, and closures
- Good gloss, rigidity, excellent flow
- Complies with U.S. FDA 21 CFR 177.152 (c) 2.1
- Complies with Canadian HPFB No Objection (With Limitations)
- Complies with EU, No 10/2011
- Consult the regulations for complete details

DOW Polyethylene 993I Low Density Polyethylene Resin is a medium molecular weight distribution homopolymer designed to offer good gloss and rigidity with excellent flow characteristics. This resin has good processability over a wide range of molding conditions.

| General | | | |
|---|---|---|---|
| Material Status | • Commercial: Active | | |
| Availability | • Asia Pacific | • Latin America | • North America |
| Additive | • Antiblock: No | • Processing Aid: No | • Slip: 400 ppm |
| Agency Ratings | • EU No 10/2011 | • FDA 21 CFR 177.1520(c) 2.1 | • HPFB (Canada) No Objection [1] |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

## ASTM & ISO Properties [2]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density / Specific Gravity | 0.925 | | ASTM D792 |
| Melt Mass-Flow Rate (190°C/2.16 kg) | 25 | g/10 min | ASTM D1238 |
| Environmental Stress-Cracking Resistance (ESCR) | | | ASTM D1693 |
| 122°F, 100% Igepal, F50 | < 1.00 | hr | |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength (Yield) | 1500 | psi | ASTM D638 |
| Tensile Strength (Break) | 1700 | psi | ASTM D638 |
| Tensile Elongation (Yield) | 3.0 | % | ASTM D638 |
| Tensile Elongation (Break) | 40 | % | ASTM D638 |
| Flexural Modulus - 2% Secant | 46000 | psi | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact (73°F) | 7.9 | ft·lb/in | ASTM D256 |
| Tensile Impact Strength [3] | 120 | ft·lb/in² | ASTM D1822 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Durometer Hardness (Shore D) | 43 | | ASTM D2240 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load (66 psi, Unannealed) | 104 | °F | ASTM D648 |
| Brittleness Temperature | -29.0 | °F | ASTM D746 |
| Vicat Softening Temperature | 199 | °F | ASTM D1525 |
| Melting Temperature (DSC) | 230 | °F | Internal Method |
| Peak Crystallization Temperature (DSC) | 212 | °F | Internal Method |

# DOW™ LDPE 993I

## The Dow Chemical Company - Low Density Polyethylene Resin

**Additional Information**

Plaque molded and tested in accordance with ASTM D4976.

### Notes

[1] With limitations

[2] Typical properties: these are not to be construed as specifications.

[3] Type S