

Eastman Eastar MB002 Copolyester

Category: Polymer, Thermoplastic, Polyester, TP

Material Notes:

Eastar copolyester MB002 is a resin specifically developed for extrusion blow molding containers in medical applications where aesthetics such as high clarity and gloss, coupled with high toughness and chemical resistance, are desirable. Compared to many commonly used materials, Eastar copolyester MB002 runs on most standard processing equipment with broader processing conditions, and its toughness and melt strength enable blow molding of larger containers with greater design flexibility. This product meets the biocompatibility requirements under FDA/ISO 10993 and USP Class 6, Plastics.Applications/UsesMedical

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eastman-Eastar-MB002-Copolyester.php

| Physical Properties | Metric | English | Comments |
|-----------------------|--------------|--------------|-----------|
| Specific Gravity | 1.25 g/cc | 1.25 g/cc | ASTM D792 |
| Linear Mold Shrinkage | 0.0030 cm/cm | 0.0030 in/in | ASTM D955 |

| Mechanical Properties | Metric | English | Comments | |
|---------------------------|-----------------------|-----------------------|---|--|
| Hardness, Rockwell R | 105 | 105 | ASTM D785 | |
| Tensile Strength at Break | 48.0 MPa | 6960 psi | ASTM D638 | |
| Tensile Strength, Yield | 47.0 MPa | 6820 psi | ASTM D638 | |
| Elongation at Break | 300 % | 300 % | ASTM D638 | |
| Elongation at Yield | 5.0 % | 5.0 % | ASTM D638 | |
| Tensile Modulus | 1.90 GPa | 276 ksi | ASTM D638 | |
| Flexural Strength | 65.0 MPa | 9430 psi | ASTM D790 | |
| Flexural Modulus | 1.90 GPa | 276 ksi | ASTM D790 | |
| Izod Impact, Notched | 0.630 J/cm | 1.18 ft-lb/in | ASTM D256 | |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | A01111 D230 | |
| | NB | NB | ASTM D256 | |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | 7.6 2230 | |
| Izod Impact, Unnotched | NB | NB | ASTM D4812 | |
| | NB | NB | ASTM D4812 | |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | A3 1191 D40 12 | |
| Puncture Energy | 41.0 J | 30.2 ft-lb | Puncture Resistance @Max Load, 0°C; ASTM D3763 | |



| Mechanical Properties | Metric 44.00 a | English SULL Halb | Comments esistance @ Max Load, |
|-----------------------|-----------------------|-----------------------|--|
| | 39.0 J | 28.8 ft-lb | Puncture Resistance at Max Load; ASTM D3763 |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | |

| Thermal Properties | Metric | English | Comments |
|--|---------|---------|----------------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 73.0 °C | 163 °F | ASTM D648 |
| Deflection Temperature at 1.8 MPa (264 psi) | 63.0 °C | 145 °F | ASTM D648 |
| Vicat Softening Point | 85.0 °C | 185 °F | 1kg load; ASTM D1525 |

| Optical Properties | Metric | English | Comments |
|-----------------------|--------|---------|-----------------------------------|
| Haze | 1.3 % | 1.3 % | ASTM D1003 |
| Gloss | 143 % | 143 % | at 60°; ASTM D2457 |
| Transmission, Visible | 87 % | 87 % | Regular Transmittance; ASTM D1003 |
| | 91 % | 91 % | Total Transmittance; ASTM D1003 |

| Descriptive Properties | Value | Comments |
|------------------------|-------|------------|
| Color, CIE a* | -0.2 | ASTM D2244 |
| Color, CIE b* | 0.6 | ASTM D2244 |
| Color, CIE L* | 95 | ASTM D2244 |

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