

# Borouge® RE420MO

Categories: Polymer; Thermoplastic; Polypropylene (PP); Polypropylene Copolymer

RE420MO is a specially modified highly-transparent polypropylene random copolymer with medium melt flow rate. This grade is intended for injection molding and stretch blow molding, and is designed for high-speed injection molding and contains nucleating and demolding additives. Products originating from this grade have excellent transparency, very good organoleptic properties, good balance of stiffness and impact strength at ambient temperature, low blooming and good demolding properties. Applications: excellent transparency, lids, pails, closures, sweet-boxes, bottles, and houseware containers.

| Physical Properties                         | Metric                                              | English                                             | Comments                              |
|---------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|---------------------------------------|
| Density                                     | 0.905 g/cc                                          | 0.0327 lb/in <sup>3</sup>                           | ISO 1183                              |
| Linear Mold Shrinkage                       | 0.010 - 0.020 cm/cm                                 | 0.010 - 0.020 in/in                                 |                                       |
| Melt Flow                                   | 13 g/10 min<br>@Load 2.16 kg,<br>Temperature 230 °C | 13 g/10 min<br>@Load 4.76 lb,<br>Temperature 446 °F | ISO 1133                              |
| Mechanical Properties                       | Metric                                              | English                                             | Comments                              |
| Hardness, Rockwell R                        | 80                                                  | 80                                                  | ISO 2039-2                            |
| Tensile Strength, Yield                     | 28.0 MPa                                            | 4060 psi                                            | 50mm/min; ISO 527-2                   |
| Elongation at Yield                         | 12%                                                 | 12%                                                 | 50mm/min; ISO 527-2                   |
| Tensile Modulus                             | 1.10 GPa                                            | 160 ksi                                             | 1mm/min; ISO 527-3                    |
| Charpy Impact, Notched                      | 0.600 J/cm <sup>2</sup><br>@Temperature 23.0 °C     | 2.86 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F  | ISO 179/1eA                           |
| Thermal Properties                          | Metric                                              | English                                             | Comments                              |
| Deflection Temperature at 0.46 MPa (66 psi) | 75.0 °C                                             | 167 °F                                              | ISO 75-2                              |
| Optical Properties                          | Metric                                              | English                                             | Comments                              |
| Transmission, Visible                       | 90%                                                 | 90%                                                 | transparent; thickness not quantified |
| Processing Properties                       | Metric                                              | English                                             | Comments                              |
| Melt Temperature                            | 210 - 260 °C                                        | 410 - 500 °F                                        |                                       |
| Mold Temperature                            | 30.0 - 40.0 °C                                      | 86.0 - 104 °F                                       |                                       |
| Hold Pressure                               | 20.0 - 50.0 MPa                                     | 2900 - 7250 psi                                     |                                       |