

# RX® 790

Phenolic

Sumitomo Bakelite North America, Inc.

## Message:

RX® 790 is a fiberglass reinforced phenolic novolac compound, featuring a good balance of strength and toughness.

| General Information    |                        |
|------------------------|------------------------|
| Filler / Reinforcement | Glass Fiber            |
| Features               | Good Strength          |
|                        | Good Toughness         |
| Appearance             | Black                  |
|                        | Green                  |
| Forms                  | Granules               |
| Processing Method      | Compression Molding    |
|                        | Injection Molding      |
|                        | Resin Transfer Molding |

| Physical                       | Nominal Value | Unit              | Test Method |
|--------------------------------|---------------|-------------------|-------------|
| Density                        | 1.73          | g/cm <sup>3</sup> | ISO 1183    |
| Apparent Density               | 0.80          | g/cm <sup>3</sup> | ISO 60      |
| Molding Shrinkage              | 0.050         | %                 | ISO 2577    |
| Water Absorption (23°C, 24 hr) | 0.060         | %                 | ISO 62      |

| Hardness                    | Nominal Value | Unit | Test Method |
|-----------------------------|---------------|------|-------------|
| Rockwell Hardness (E-Scale) | 95            |      | ISO 2039-2  |

| Mechanical                                 | Nominal Value | Unit | Test Method |
|--------------------------------------------|---------------|------|-------------|
| Tensile Stress (Break, Compression Molded) | 105           | MPa  | ISO 527-2   |
| Flexural Modulus (Compression Molded)      | 16000         | MPa  | ISO 178     |
| Flexural Stress (Compression Molded)       | 215           | MPa  | ISO 178     |
| Compressive Stress                         | 380           | MPa  | ISO 604     |

| Impact                                            | Nominal Value | Unit              | Test Method |
|---------------------------------------------------|---------------|-------------------|-------------|
| Notched Izod Impact Strength (Compression Molded) | 3.5           | kJ/m <sup>2</sup> | ISO 180     |

| Thermal                     | Nominal Value | Unit     | Test Method |
|-----------------------------|---------------|----------|-------------|
| Heat Deflection Temperature |               |          | ISO 75-2/A  |
| 1.8 MPa, Unannealed         | 215           | °C       |             |
| 1.8 MPa, Annealed           | > 282         | °C       |             |
| CLTE - Flow                 | 1.6E-5        | cm/cm/°C | ASTM E831   |
| Thermal Conductivity        | 0.58          | W/m/K    | ASTM C518   |

| Electrical                 | Nominal Value | Unit  | Test Method |
|----------------------------|---------------|-------|-------------|
| Dielectric Strength        | 14            | kV/mm | ASTM D149   |
| Arc Resistance             | 145           | sec   | ASTM D495   |
| Comparative Tracking Index | 175           | V     | IEC 60112   |

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