

# VALOX™ 430 resin

Polybutylene Terephthalate

SABIC Innovative Plastics

Message:

33 % glass reinforced, impact modified. Connectors, etc.

| General Information                                  |                                                       |                    |                 |
|------------------------------------------------------|-------------------------------------------------------|--------------------|-----------------|
| UL YellowCard                                        | E207780-100140794                                     |                    |                 |
| Filler / Reinforcement                               | Glass fiber reinforced material, 33% filler by weight |                    |                 |
| Additive                                             | Impact modifier                                       |                    |                 |
| Features                                             | Impact modification                                   |                    |                 |
| Uses                                                 | Connector                                             |                    |                 |
| Processing Method                                    | Injection molding                                     |                    |                 |
| Physical                                             | Nominal Value                                         | Unit               | Test Method     |
| Specific Gravity                                     | 1.52                                                  | g/cm <sup>3</sup>  | ASTM D792       |
| Specific Volume                                      | 0.650                                                 | cm <sup>3</sup> /g | ASTM D792       |
| Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)            | 12                                                    | g/10 min           | ASTM D1238      |
| Molding Shrinkage                                    |                                                       |                    | Internal method |
| Flow <sup>1</sup>                                    | 0.30 - 0.50                                           | %                  | Internal method |
| Flow <sup>2</sup>                                    | 0.50 - 0.80                                           | %                  | Internal method |
| Flow: 3.20mm                                         | 0.50                                                  | %                  | Internal method |
| Transverse flow <sup>3</sup>                         | 0.40 - 0.60                                           | %                  | Internal method |
| Transverse flow <sup>4</sup>                         | 0.60 - 0.90                                           | %                  | Internal method |
| Water Absorption (24 hr)                             | 0.050                                                 | %                  | ASTM D570       |
| Hardness                                             | Nominal Value                                         | Unit               | Test Method     |
| Rockwell Hardness (R-Scale)                          | 125                                                   |                    | ASTM D785       |
| Mechanical                                           | Nominal Value                                         | Unit               | Test Method     |
| Tensile Modulus <sup>5</sup>                         | 8670                                                  | MPa                | ASTM D638       |
| Tensile Strength <sup>6</sup> (Break)                | 106                                                   | MPa                | ASTM D638       |
| Tensile Elongation <sup>7</sup> (Break)              | 3.1                                                   | %                  | ASTM D638       |
| Flexural Modulus <sup>8</sup> (50.0 mm Span)         | 7810                                                  | MPa                | ASTM D790       |
| Flexural Strength <sup>9</sup> (Break, 50.0 mm Span) | 174                                                   | MPa                | ASTM D790       |
| Impact                                               | Nominal Value                                         | Unit               | Test Method     |
| Notched Izod Impact (23°C)                           | 130                                                   | J/m                | ASTM D256       |
| Unnotched Izod Impact (23°C)                         | 860                                                   | J/m                | ASTM D4812      |
| Thermal                                              | Nominal Value                                         | Unit               | Test Method     |
| Deflection Temperature Under Load                    |                                                       |                    | ASTM D648       |
| 0.45 MPa, unannealed, 6.40mm                         | 223                                                   | °C                 | ASTM D648       |
| 1.8 MPa, unannealed, 6.40mm                          | 208                                                   | °C                 | ASTM D648       |

|                                       |                    |             |        |
|---------------------------------------|--------------------|-------------|--------|
| RTI Elec                              | 130                | °C          | UL 746 |
| RTI Imp                               | 130                | °C          | UL 746 |
| RTI                                   | 140                | °C          | UL 746 |
| Electrical                            | Nominal Value      | Test Method |        |
| Arc Resistance <sup>10</sup>          | PLC 5              | ASTM D495   |        |
| Comparative Tracking Index (CTI)      | PLC 1              | UL 746      |        |
| High Amp Arc Ignition (HAI)           | PLC 2              | UL 746      |        |
| High Voltage Arc Tracking Rate (HVTR) | PLC 0              | UL 746      |        |
| Hot-wire Ignition (HWI)               | PLC 0              | UL 746      |        |
| Flammability                          | Nominal Value      | Test Method |        |
| Flame Rating (1.47 mm)                | HB                 | UL 94       |        |
| Injection                             | Nominal Value      | Unit        |        |
| Drying Temperature                    | 121                | °C          |        |
| Drying Time                           | 3.0 - 4.0          | hr          |        |
| Drying Time, Maximum                  | 12                 | hr          |        |
| Suggested Max Moisture                | 0.020              | %           |        |
| Suggested Shot Size                   | 40 - 80            | %           |        |
| Rear Temperature                      | 238 - 254          | °C          |        |
| Middle Temperature                    | 243 - 260          | °C          |        |
| Front Temperature                     | 249 - 266          | °C          |        |
| Nozzle Temperature                    | 243 - 260          | °C          |        |
| Processing (Melt) Temp                | 249 - 266          | °C          |        |
| Mold Temperature                      | 65.6 - 87.8        | °C          |        |
| Back Pressure                         | 0.345 - 0.689      | MPa         |        |
| Screw Speed                           | 50 - 80            | rpm         |        |
| Vent Depth                            | 0.025 - 0.038      | mm          |        |
| NOTE                                  |                    |             |        |
| 1.                                    | 1.5 to 3.2 mm      |             |        |
| 2.                                    | 3.2 to 4.6 mm      |             |        |
| 3.                                    | 1.5 to 3.2 mm      |             |        |
| 4.                                    | 3.2-4.6 mm         |             |        |
| 5.                                    | 5.0 mm/min         |             |        |
| 6.                                    | Type 1, 5.0 mm/min |             |        |
| 7.                                    | Type 1, 5.0 mm/min |             |        |
| 8.                                    | 1.3 mm/min         |             |        |
| 9.                                    | 1.3 mm/min         |             |        |
| 10.                                   | Tungsten electrode |             |        |

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