

# GELOY<sup>TM</sup> RESIN XTPMFR10

REGION AMERICAS

## DESCRIPTION

PC/ASA, chlorine and bromine free.

## TYPICAL PROPERTY VALUES

| PROPERTIES                                 | TYPICAL VALUES | UNITS             | TEST METHODS |
|--------------------------------------------|----------------|-------------------|--------------|
| <b>MECHANICAL</b>                          |                |                   |              |
| Tensile Stress, yld, Type I, 50 mm/min     | 65             | MPa               | ASTM D 638   |
| Tensile Stress, brk, Type I, 50 mm/min     | 47             | MPa               | ASTM D 638   |
| Tensile Stress, yld, Type I, 5 mm/min      | 60             | MPa               | ASTM D 638   |
| Tensile Stress, brk, Type I, 5 mm/min      | 49             | MPa               | ASTM D 638   |
| Tensile Strain, yld, Type I, 50 mm/min     | 4              | %                 | ASTM D 638   |
| Tensile Strain, brk, Type I, 50 mm/min     | 31             | %                 | ASTM D 638   |
| Tensile Strain, yld, Type I, 5 mm/min      | 4              | %                 | ASTM D 638   |
| Tensile Strain, brk, Type I, 5 mm/min      | 58             | %                 | ASTM D 638   |
| Tensile Modulus, 50 mm/min                 | 2680           | MPa               | ASTM D 638   |
| Tensile Stress, yield, 5 mm/min            | 61             | MPa               | ISO 527      |
| Tensile Stress, break, 5 mm/min            | 46             | MPa               | ISO 527      |
| Tensile Stress, yield, 50 mm/min           | 66             | MPa               | ISO 527      |
| Tensile Stress, break, 50 mm/min           | 47             | MPa               | ISO 527      |
| Tensile Strain, yield, 5 mm/min            | 4              | %                 | ISO 527      |
| Tensile Strain, break, 5 mm/min            | 50             | %                 | ISO 527      |
| Tensile Strain, yield, 50 mm/min           | 4              | %                 | ISO 527      |
| Tensile Strain, break, 50 mm/min           | 21             | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                  | 2680           | MPa               | ISO 527      |
| Flexural Stress, yield, 2 mm/min           | 97             | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                 | 2720           | MPa               | ISO 178      |
| <b>IMPACT</b>                              |                |                   |              |
| Izod Impact, notched, 23°C                 | 330            | J/m               | ASTM D 256   |
| Izod Impact, notched, -30°C                | 90             | J/m               | ASTM D 256   |
| Multiaxial Impact                          | 85             | J                 | ISO 6603     |
| Izod Impact, notched 80*10*4 +23°C         | 13             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, notched 80*10*4 0°C           | 12             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 13             | kJ/m <sup>2</sup> | ISO 179/1eA  |
| <b>THERMAL</b>                             |                |                   |              |
| CTE, -40°C to 40°C, flow                   | 6.3E-05        | 1/°C              | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow                  | 6.3E-05        | 1/°C              | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50            | 96             | °C                | ISO 306      |
| Vicat Softening Temp, Rate B/120           | 98             | °C                | ISO 306      |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm     | 90             | °C                | ISO 75/Bf    |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm      | 81             | °C                | ISO 75/Af    |

| PROPERTIES                             | TYPICAL VALUES | UNITS                   | TEST METHODS      |
|----------------------------------------|----------------|-------------------------|-------------------|
| PHYSICAL                               |                |                         |                   |
| Density                                | 1.18           | g/cm <sup>3</sup>       | ISO 1183          |
| Melt Volume Rate, MVR at 260°C/2.16 kg | 30             | cm <sup>3</sup> /10 min | ISO 1133          |
| Melt Viscosity, 260°C, 1500 sec-1      | 105            | Pa-s                    | ISO 11443         |
| FLAME CHARACTERISTICS                  |                |                         |                   |
| UL Compliant, 94V-0 Flame Class Rating | 1              | mm                      | UL 94 by SABIC-IP |
| INJECTION MOLDING                      |                |                         |                   |
| Drying Temperature                     | 80 – 90        | °C                      |                   |
| Drying Time                            | 2 – 4          | hrs                     |                   |
| Maximum Moisture Content               | 0.02           | %                       |                   |
| Melt Temperature                       | 230 – 270      | °C                      |                   |
| Nozzle Temperature                     | 220 – 260      | °C                      |                   |
| Front - Zone 3 Temperature             | 230 – 270      | °C                      |                   |
| Middle - Zone 2 Temperature            | 220 – 260      | °C                      |                   |
| Rear - Zone 1 Temperature              | 200 – 230      | °C                      |                   |
| Hopper Temperature                     | 60 – 80        | °C                      |                   |
| Mold Temperature                       | 50 – 70        | °C                      |                   |