



# GELOY™ RESIN CR3020

REGION AMERICAS

## DESCRIPTION

ASA, excellent weatherable, extrusion grade

## TYPICAL PROPERTY VALUES

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|----------------------------------------------|----------------|-------------------|--------------|
| <b>MECHANICAL</b>                            |                |                   |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 39             | MPa               | ASTM D 638   |
| Tensile Stress, brk, Type I, 50 mm/min       | 30             | MPa               | ASTM D 638   |
| Tensile Strain, yld, Type I, 50 mm/min       | 3.5            | %                 | ASTM D 638   |
| Tensile Strain, brk, Type I, 50 mm/min       | 38             | %                 | ASTM D 638   |
| Tensile Modulus, 5 mm/min                    | 1840           | MPa               | ASTM D 638   |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 57             | MPa               | ASTM D 790   |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 1860           | MPa               | ASTM D 790   |
| Tensile Stress, yield, 50 mm/min             | 39             | MPa               | ISO 527      |
| Tensile Stress, break, 50 mm/min             | 31             | MPa               | ISO 527      |
| Tensile Strain, yield, 50 mm/min             | 3.4            | %                 | ISO 527      |
| Tensile Strain, break, 50 mm/min             | 23             | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 1800           | MPa               | ISO 527      |
| Flexural Stress, yield, 2 mm/min             | 56             | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                   | 1800           | MPa               | ISO 178      |
| <b>IMPACT</b>                                |                |                   |              |
| Izod Impact, notched, 23°C                   | 8              | J/m               | ASTM D 256   |
| Izod Impact, notched, -30°C                  | 1              | J/m               | ASTM D 256   |
| Instrumented Impact Total Energy, 23°C       | 4              | J                 | ASTM D 3763  |
| Izod Impact, notched 80*10*4 +23°C           | 25             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, notched 80*10*4 -30°C           | 3              | kJ/m <sup>2</sup> | ISO 180/1A   |
| <b>THERMAL</b>                               |                |                   |              |
| Vicat Softening Temp, Rate B/50              | 100            | °C                | ASTM D 1525  |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 74             | °C                | ASTM D 648   |
| CTE, -40°C to 40°C, flow                     | 1.4E-04        | 1/°C              | ISO 11359-2  |
| CTE, -40°C to 40°C, xflow                    | 2.E-04         | 1/°C              | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50              | 100            | °C                | ISO 306      |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm        | 77             | °C                | ISO 75/Af    |

| PROPERTIES                       | TYPICAL VALUES | UNITS             | TEST METHODS |
|----------------------------------|----------------|-------------------|--------------|
| PHYSICAL                         |                |                   |              |
| Specific Gravity                 | 1.07           | -                 | ASTM D 792   |
| Mold Shrinkage, flow, 3.2 mm (5) | 0.55 – 0.63    | %                 | SABIC method |
| Melt Flow Rate, 220°C/10.0 kgf   | 5              | g/10 min          | ASTM D 1238  |
| Density                          | 1.07           | g/cm <sup>3</sup> | ISO 1183     |
| Melt Flow Rate, 220°C/10.0 kg    | 6              | g/10 min          | ISO 1133     |
| PROFILE EXTRUSION                |                |                   |              |
| Drying Temperature               | 80 – 90        | °C                |              |
| Drying Time                      | 3 – 6          | hrs               |              |
| Drying Time (Cumulative)         | 12             | hrs               |              |
| Minimum Moisture Content         | 0.02           | %                 |              |
| Melt Temperature                 | 225 – 255      | °C                |              |
| Barrel - Zone 1 Temperature      | 205 – 215      | °C                |              |
| Barrel - Zone 2 Temperature      | 215 – 230      | °C                |              |
| Barrel - Zone 3 Temperature      | 220 – 240      | °C                |              |
| Barrel - Zone 4 Temperature      | 225 – 245      | °C                |              |
| Adapter Temperature              | 225 – 245      | °C                |              |
| Die Temperature                  | 225 – 245      | °C                |              |
| Calibrator Temperature           | 15 – 65        | °C                |              |