

## Geloy\* Resin XTPM405 Americas: COMMERCIAL

High flow PC/ASA with improved impact at room and low temperatures. Improved release. Excellent weatherability for outdoor unpainted or clearcoated applications. Injection Moldable with large color gamut.

| TYPICAL PROPERTIES <sup>1</sup>         | TYPICAL VALUE | Unit                | Standard    |
|-----------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                       |               |                     |             |
| Tensile Stress, yield                   | 490           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, break                   | 90            | %                   | ASTM D 638  |
| Tensile Modulus, 5 mm/min               | 24400         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, yield, 50 mm/min        | 47            | MPa                 | ISO 527     |
| Tensile Stress, break, 50 mm/min        | 39            | MPa                 | ISO 527     |
| Tensile Strain, yield, 50 mm/min        | 3             | %                   | ISO 527     |
| Tensile Strain, break, 50 mm/min        | 55            | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min               | 2400          | MPa                 | ISO 527     |
| Flexural Stress, yield, 2 mm/min        | 75            | MPa                 | ISO 178     |
| Flexural Modulus, 2 mm/min              | 2200          | MPa                 | ISO 178     |
| <b>IMPACT</b>                           |               |                     |             |
| Izod Impact, notched, 23°C              | 144           | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, notched, 0°C               | 13            | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, notched, -20°C             | 13            | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Total Energy, 23°C  | 407           | cm-kgf              | ASTM D 3763 |
| Instrumented Impact Total Energy, -30°C | 112           | cm-kgf              | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C      | 65            | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -30°C      | 10            | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Charpy Impact, notched, 23°C            | 65            | kJ/m <sup>2</sup>   | ISO 179/2C  |
| <b>THERMAL</b>                          |               |                     |             |
| Vicat Softening Temp, Rate B/50         | 103           | °C                  | ISO 306     |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm   | 88            | °C                  | ISO 75/Af   |
| <b>PHYSICAL</b>                         |               |                     |             |
| Melt Flow Rate, 260°C/5.0 kgf           | 30            | g/10 min            | ASTM D 1238 |

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23±176;C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Source GMD, last updated:

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**Americas: COMMERCIAL**

| TYPICAL PROPERTIES <sup>1</sup>   | TYPICAL VALUE | Unit              | Standard  |
|-----------------------------------|---------------|-------------------|-----------|
| <b>PHYSICAL</b>                   |               |                   |           |
| Density                           | 1.12          | g/cm <sup>3</sup> | ISO 1183  |
| Melt Flow Rate, 220°C/10.0 kg     | 14            | g/10 min          | ISO 1133  |
| Melt Viscosity, 260°C, 1500 sec-1 | 120           | Pa-s              | ISO 11443 |

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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 90 - 100      | °C   |
| Drying Time                 | 3 - 4         | hrs  |
| Drying Time (Cumulative)    | 8             | hrs  |
| Maximum Moisture Content    | 0.04          | %    |
| Melt Temperature            | 255 - 270     | °C   |
| Nozzle Temperature          | 240 - 255     | °C   |
| Front - Zone 3 Temperature  | 245 - 260     | °C   |
| Middle - Zone 2 Temperature | 240 - 255     | °C   |
| Rear - Zone 1 Temperature   | 230 - 250     | °C   |
| Mold Temperature            | 55 - 70       | °C   |
| Back Pressure               | 0.3 - 1       | MPa  |
| Screw Speed                 | 30 - 80       | rpm  |
| Shot to Cylinder Size       | 40 - 80       | %    |
| Vent Depth                  | 0.038 - 0.076 | mm   |

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