

# GELOY™ RESIN FXW751SK

REGION ASIA

## DESCRIPTION

Sparkle Metallic VisualFx ASA+PC Resin - Weatherable, High Heat & Impact Resin

## TYPICAL PROPERTY VALUES

Revision 20170816

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|----------------------------------------------|----------------|-------------------|--------------|
| MECHANICAL                                   |                |                   |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 62             | MPa               | ASTM D 638   |
| Tensile Stress, brk, Type I, 50 mm/min       | 48             | MPa               | ASTM D 638   |
| Tensile Strain, yld, Type I, 50 mm/min       | 4.2            | %                 | ASTM D 638   |
| Tensile Strain, brk, Type I, 50 mm/min       | 49             | %                 | ASTM D 638   |
| Tensile Modulus, 5 mm/min                    | 2680           | MPa               | ASTM D 638   |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 95             | MPa               | ASTM D 790   |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 2750           | MPa               | ASTM D 790   |
| Tensile Stress, yield, 50 mm/min             | 60             | MPa               | ISO 527      |
| Tensile Stress, break, 50 mm/min             | 48             | MPa               | ISO 527      |
| Tensile Strain, yield, 50 mm/min             | 4.2            | %                 | ISO 527      |
| Tensile Strain, break, 50 mm/min             | 77             | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 2900           | MPa               | ISO 527      |
| Flexural Stress, yield, 2 mm/min             | 78             | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                   | 2700           | MPa               | ISO 178      |
| IMPACT                                       |                |                   |              |
| Izod Impact, notched, 23°C                   | 170            | J/m               | ASTM D 256   |
| Izod Impact, notched, -30°C                  | 50             | J/m               | ASTM D 256   |
| Instrumented Impact Total Energy, 23°C       | 43             | J                 | ASTM D 3763  |
| Izod Impact, notched 80*10*4 +23°C           | 17             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, notched 80*10*4 -30°C           | 5              | kJ/m <sup>2</sup> | ISO 180/1A   |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm   | 17             | kJ/m <sup>2</sup> | ISO 179/1eA  |
| THERMAL                                      |                |                   |              |
| Vicat Softening Temp, Rate B/50              | 105            | °C                | ASTM D 1525  |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 89             | °C                | ASTM D 648   |
| CTE, -40°C to 40°C, flow                     | 7.2E-05        | 1/°C              | ASTM E 831   |
| CTE, -40°C to 40°C, xflow                    | 7.2E-05        | 1/°C              | ASTM E 831   |
| CTE, -40°C to 40°C, flow                     | 7.2E-05        | 1/°C              | ISO 11359-2  |



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|----------------------------------------|----------------|-------------------------|--------------|
| CTE, -40°C to 40°C, xflow              | 7.2E-05        | 1/°C                    | ISO 11359-2  |
| Vicat Softening Temp, Rate B/50        | 108            | °C                      | ISO 306      |
| Vicat Softening Temp, Rate B/120       | 109            | °C                      | ISO 306      |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm  | 93             | °C                      | ISO 75/Af    |
| <b>PHYSICAL</b>                        |                |                         |              |
| Specific Gravity                       | 1.16           | -                       | ASTM D 792   |
| Mold Shrinkage, flow, 3.2 mm (5)       | 0.5 – 0.7      | %                       | SABIC method |
| Melt Flow Rate, 220°C/10.0 kgf         | 8.3            | g/10 min                | ASTM D 1238  |
| Density                                | 1.16           | g/cm <sup>3</sup>       | ISO 1183     |
| Water Absorption, (23°C/sat)           | 1              | %                       | ISO 62       |
| Moisture Absorption (23°C / 50% RH)    | 0.25           | %                       | ISO 62       |
| Melt Volume Rate, MVR at 220°C/10.0 kg | 7              | cm <sup>3</sup> /10 min | ISO 1133     |
| <b>INJECTION MOLDING</b>               |                |                         |              |
| Drying Temperature                     | 95 – 105       | °C                      |              |
| Drying Time                            | 3 – 4          | hrs                     |              |
| Drying Time (Cumulative)               | 8              | hrs                     |              |
| Maximum Moisture Content               | 0.04           | %                       |              |
| Melt Temperature                       | 260 – 275      | °C                      |              |
| Nozzle Temperature                     | 245 – 265      | °C                      |              |
| Front - Zone 3 Temperature             | 250 – 265      | °C                      |              |
| Middle - Zone 2 Temperature            | 245 – 260      | °C                      |              |
| Rear - Zone 1 Temperature              | 240 – 255      | °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                      |              |

## DISCLAIMER

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