

SABIC Innovative Plastics GELOY HRA150 ASA (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , ASA Polymer

Material Notes:

GELOY HRA150 is a high heat resistant ASA+PC. GELOY HRA150 shows high impact retention and color stability upon weathering, and hence can be positioned in various outdoor and indoor applications requiring superior weathering properties.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-GELOY-HRA150-ASA-Europe-Africa-Middle-East.php

| Physical Properties | Metric | English | Comments |
|--------------------------------|---|---|---|
| Density | 1.15 g/cc | 0.0415 lb/in ³ | ISO 1183 |
| Moisture Absorption | 0.200 % | 0.200 % | 23°C / 50% RH; ISO 62 |
| Water Absorption at Saturation | 0.60 % | 0.60 % | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0040 - 0.0060 cm/cm | 0.0040 - 0.0060 in/in | on Tensile Bar; SABIC Method |
| Melt Index of Compound | 15 g/10 min @Load 5.00 kg, Temperature 260 °C | 15 g/10 min @Load 11.0 lb, Temperature 500 °F | MVR [cm ³ /10 min]; ISO 1133 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------|-----------|--------------------|
| Hardness, Rockwell R | 118 | 118 | ISO 2039-2 |
| Hardness, H358/30 | 104 MPa | 15100 psi | ISO 2039-1 |
| Tensile Strength at Break | 55.0 MPa | 7980 psi | 5 mm/min; ISO 527 |
| | 59.0 MPa | 8560 psi | 50 mm/min; ISO 527 |
| Tensile Strength, Yield | 55.0 MPa | 7980 psi | 5 mm/min; ISO 527 |
| | 59.0 MPa | 8560 psi | 50 mm/min; ISO 527 |
| Elongation at Break | >= 50 % | >= 50 % | 50 mm/min; ISO 527 |
| | 120 % | 120 % | 5 mm/min; ISO 527 |
| Elongation at Yield | 4.0 % | 4.0 % | 5 mm/min; ISO 527 |
| | 4.0 % | 4.0 % | 50 mm/min; ISO 527 |
| Tensile Modulus | 2.50 GPa | 363 ksi | 1 mm/min; ISO 527 |
| Flexural Yield Strength | 80.0 MPa | 11600 psi | 2 mm/min; ISO 178 |
| Flexural Modulus | 2.40 GPa | 348 ksi | 2 mm/min; ISO 178 |

| Impact, Notched (ISO) Mechanical Properties | 65.0 kJ/m ² Metric | 30.9 ft-lb/in ² English | 80*10*4; ISO 180/1A Comments |
|--|---|---|------------------------------------|
| | 10.0 kJ/m ² @Temperature -30.0 °C | 4.76 ft-lb/in ² @Temperature -22.0 °F | 80*10*4; ISO 180/1A |
| Charpy Impact, Notched | 6.50 J/cm ² | 30.9 ft-lb/in ² | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
| | 1.00 J/cm ² @Temperature -30.0 °C | 4.76 ft-lb/in ² @Temperature -22.0 °F | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
| Taber Abrasion, mg/1000 Cycles | 125 | 125 | CS-17, 1 kg; SABIC Method |

| Thermal Properties | Metric | English | Comments |
|---|---|--|------------------------------------|
| CTE, linear, Parallel to Flow | 80.0 µm/m-°C @Temperature 23.0 - 60.0 °C | 44.4 µin/in-°F @Temperature 73.4 - 140 °F | ISO 11359-2 |
| Thermal Conductivity | 0.200 W/m-K | 1.39 BTU-in/hr-ft ² -°F | ISO 8302 |
| Hot Ball Pressure Test | <= 105 °C | <= 221 °F | IEC 60695-10-2 |
| Deflection Temperature at 0.46 MPa (66 psi) | 125 °C | 257 °F | Edgew 120*10*4 sp=100mm; ISO 75/Be |
| Deflection Temperature at 1.8 MPa (264 psi) | 101 °C | 214 °F | Edgew 120*10*4 sp=100mm; ISO 75/Ae |
| Vicat Softening Point | 119 °C | 246 °F | Rate B/50; ISO 306 |
| | 120 °C | 248 °F | Rate B/120; ISO 306 |
| UL RTI, Electrical | 50.0 °C | 122 °F | UL 746B |
| UL RTI, Mechanical with Impact | 50.0 °C | 122 °F | UL 746B |
| UL RTI, Mechanical without Impact | 50.0 °C | 122 °F | UL 746B |
| Flammability, UL94 | HB @Thickness 0.750 mm | HB @Thickness 0.0295 in | UL 94 |
| | HB @Thickness 3.00 mm | HB @Thickness 0.118 in | UL 94 |
| Oxygen Index | 20 % | 20 % | ISO 4589 |
| Glow Wire Test | 750 °C @Thickness 3.20 mm | 1380 °F @Thickness 0.126 in | IEC 60695-2-12 |

| Electrical Properties | Metric | English | Comments |
|-----------------------|--------|---------|----------|
|-----------------------|--------|---------|----------|

| Volume Resistivity Electrical Properties | $\geq 1.00e+15$ ohm-cm Metric | $\geq 1.00e+15$ ohm-cm English | IEC 60093 Comments |
|---|-----------------------------------|-----------------------------------|-----------------------|
| Surface Resistance | $\geq 1.00e+15$ ohm | $\geq 1.00e+15$ ohm | ROA; IEC 60093 |
| Dielectric Constant | 2.9 @Frequency 1.00e+6 Hz | 2.9 @Frequency 1.00e+6 Hz | IEC 60250 |
| Dielectric Strength | 17.0 kV/mm @Thickness 3.20 mm | 432 kV/in @Thickness 0.126 in | in oil; IEC 60243-1 |
| Dissipation Factor | 0.015 @Frequency 1.00e+6 Hz | 0.015 @Frequency 1.00e+6 Hz | IEC 60250 |
| Comparative Tracking Index | 175 V | 175 V | IEC 60112 |

| Descriptive Properties | Value | Comments |
|----------------------------------|--------|----------------|
| Ball Pressure Test, 75°C +/- 2°C | PASSES | IEC 60695-10-2 |

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