

## SABIC Innovative Plastics GELOY CR8510 ASA (Asia Pacific)

Category : Polymer , Thermoplastic , ASA Polymer

### Material Notes:

ASA with outstanding UV exposure performance for both exterior and interior applications. F1 Rated.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-GELOY-CR8510-ASA-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-GELOY-CR8510-ASA-Asia-Pacific.php)

| Physical Properties            | Metric                            | English                           | Comments                                |
|--------------------------------|-----------------------------------|-----------------------------------|-----------------------------------------|
| Specific Gravity               | 1.08 g/cc                         | 1.08 g/cc                         | ASTM D792                               |
| Density                        | 1.07 g/cc                         | 0.0387 lb/in <sup>3</sup>         | ISO 1183                                |
| Moisture Absorption            | 0.200 %                           | 0.200 %                           | 23°C / 50% RH; ISO 62                   |
| Water Absorption at Saturation | 0.50 %                            | 0.50 %                            | ISO 62                                  |
| Linear Mold Shrinkage, Flow    | 0.0050 - 0.0080 cm/cm             | 0.0050 - 0.0080 in/in             | SABIC Method                            |
|                                | @Thickness 3.20 mm                | @Thickness 0.126 in               |                                         |
| Melt Flow                      | 6.3 g/10 min                      | 6.3 g/10 min                      | ASTM D1238                              |
|                                | @Load 10.0 kg, Temperature 220 °C | @Load 22.0 lb, Temperature 428 °F |                                         |
|                                | 7.8 g/10 min                      | 7.8 g/10 min                      | ASTM D1238                              |
|                                | @Load 3.80 kg, Temperature 280 °C | @Load 8.38 lb, Temperature 536 °F |                                         |
|                                | 11 g/10 min                       | 11 g/10 min                       | ASTM D1238                              |
|                                | @Load 5.00 kg, Temperature 260 °C | @Load 11.0 lb, Temperature 500 °F |                                         |
| Melt Index of Compound         | 6.0 g/10 min                      | 6.0 g/10 min                      | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |
|                                | @Load 10.0 kg, Temperature 220 °C | @Load 22.0 lb, Temperature 428 °F |                                         |
|                                | 10 g/10 min                       | 10 g/10 min                       | MVR [cm <sup>3</sup> /10 min]; ISO 1133 |
|                                | @Load 5.00 kg, Temperature 260 °C | @Load 11.0 lb, Temperature 500 °F |                                         |

| Mechanical Properties     | Metric   | English  | Comments                     |
|---------------------------|----------|----------|------------------------------|
| Hardness, Rockwell R      | 93       | 93       | ASTM D785                    |
| Tensile Strength at Break | 19.0 MPa | 2760 psi | 50 mm/min; ISO 527           |
|                           | 33.0 MPa | 4790 psi | Type I, 50 mm/min; ASTM D638 |

| Tensile Strength, Yield<br>Mechanical Properties | 40.0 MPa<br>Metric     | 5800 psi<br>English        | Type I, 50 mm/min; ASTM D638<br>Comments |
|--------------------------------------------------|------------------------|----------------------------|------------------------------------------|
|                                                  | 43.0 MPa               | 6240 psi                   | 50 mm/min; ISO 527                       |
| Elongation at Break                              | 35 %                   | 35 %                       | 50 mm/min; ISO 527                       |
|                                                  | 60 %                   | 60 %                       | Type I, 50 mm/min; ASTM D638             |
| Elongation at Yield                              | 3.3 %                  | 3.3 %                      | 50 mm/min; ISO 527                       |
|                                                  | 3.6 %                  | 3.6 %                      | Type I, 50 mm/min; ASTM D638             |
| Tensile Modulus                                  | 1.97 GPa               | 286 ksi                    | 5 mm/min; ASTM D638                      |
|                                                  | 2.04 GPa               | 296 ksi                    | 1 mm/min; ISO 527                        |
|                                                  | 2.07 GPa               | 300 ksi                    | 50 mm/min; ASTM D638                     |
| Flexural Yield Strength                          | 64.0 MPa               | 9280 psi                   | 2 mm/min; ISO 178                        |
|                                                  | 68.0 MPa               | 9860 psi                   | 1.3 mm/min, 50 mm span; ASTM D790        |
| Flexural Modulus                                 | 2.06 GPa               | 299 ksi                    | 2 mm/min; ISO 178                        |
|                                                  | 2.17 GPa               | 315 ksi                    | 1.3 mm/min, 50 mm span; ASTM D790        |
| Izod Impact, Notched                             | 4.00 J/cm              | 7.49 ft-lb/in              | ASTM D256                                |
|                                                  | 0.600 J/cm             | 1.12 ft-lb/in              | ASTM D256                                |
|                                                  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                          |
| Izod Impact, Notched (ISO)                       | 15.0 kJ/m <sup>2</sup> | 7.14 ft-lb/in <sup>2</sup> | 80*10*4; ISO 180/1A                      |
|                                                  | 6.00 kJ/m <sup>2</sup> | 2.86 ft-lb/in <sup>2</sup> | 80*10*4; ISO 180/1A                      |
|                                                  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                          |
| Charpy Impact, Notched                           | 1.40 J/cm <sup>2</sup> | 6.66 ft-lb/in <sup>2</sup> | Edgew 80*10*4 sp=62mm; ISO 179/1eA       |
| Dart Drop, Total Energy                          | 4.00 J                 | 2.95 ft-lb                 | ASTM D3763                               |
|                                                  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                                          |
|                                                  | 30.0 J                 | 22.1 ft-lb                 | ASTM D3763                               |
|                                                  | @Temperature 23.0 °C   | @Temperature 73.4 °F       |                                          |

| Thermal Properties            | Metric                       | English                     | Comments   |
|-------------------------------|------------------------------|-----------------------------|------------|
| CTE, linear, Parallel to Flow | 84.0 µm/m-°C                 | 46.7 µin/in-°F              | ASTM E 831 |
|                               | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F |            |

| Thermal Properties                          | 84.0 µm/m-°C<br>Metric       | 46.7 µin/in-°F<br>English   | Comments<br>ISO 11359-2            |
|---------------------------------------------|------------------------------|-----------------------------|------------------------------------|
|                                             | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F |                                    |
| CTE, linear, Transverse to Flow             | 95.0 µm/m-°C                 | 52.8 µin/in-°F              | ASTM E 831                         |
|                                             | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F |                                    |
|                                             | 95.0 µm/m-°C                 | 52.8 µin/in-°F              | ISO 11359-2                        |
|                                             | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F |                                    |
| Hot Ball Pressure Test                      | <= 98.0 °C                   | <= 208 °F                   | IEC 60695-10-2                     |
| Deflection Temperature at 0.46 MPa (66 psi) | 103 °C                       | 217 °F                      | Flatw 80*10*4 sp=64mm; ISO 75/Bf   |
|                                             | 103 °C                       | 217 °F                      | unannealed; ASTM D648              |
|                                             | @Thickness 3.20 mm           | @Thickness 0.126 in         |                                    |
| Deflection Temperature at 1.8 MPa (264 psi) | 88.0 °C                      | 190 °F                      | Edgew 120*10*4 sp=100mm; ISO 75/Ae |
|                                             | 89.0 °C                      | 192 °F                      | Flatw 80*10*4 sp=64mm; ISO 75/Af   |
|                                             | 90.0 °C                      | 194 °F                      | unannealed; ASTM D648              |
|                                             | @Thickness 3.20 mm           | @Thickness 0.126 in         |                                    |
| Vicat Softening Point                       | 98.0 °C                      | 208 °F                      | Rate B/50; ASTM D1525              |
|                                             | 102 °C                       | 216 °F                      | Rate B/50; ISO 306                 |
|                                             | 105 °C                       | 221 °F                      | Rate B/120; ISO 306                |
| Flammability, UL94                          | HB                           | HB                          | UL 94                              |
|                                             | @Thickness 1.50 mm           | @Thickness 0.0591 in        |                                    |

| Optical Properties | Metric | English | Comments                          |
|--------------------|--------|---------|-----------------------------------|
| Gloss              | 94 %   | 94 %    | untextured, 60 degrees; ASTM D523 |

| Electrical Properties      | Metric                | English               | Comments  |
|----------------------------|-----------------------|-----------------------|-----------|
| Dissipation Factor         | 0.018                 | 0.018                 | ASTM D150 |
|                            | @Frequency 100000 Hz  | @Frequency 100000 Hz  |           |
|                            | 0.026                 | 0.026                 | ASTM D150 |
|                            | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz |           |
| Comparative Tracking Index | 600 V                 | 600 V                 | IEC 60112 |

| Electrical Properties              | Metric | English | Comments |
|------------------------------------|--------|---------|----------|
| Descriptive Properties             |        | Value   | Comments |
| UV-light, water exposure/immersion |        | F1      | UL 746C  |

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