

## SABIC Innovative Plastics LNP STAT-LOY AF3009 ABS (Asia Pacific)

Category : Polymer , Thermoplastic , ABS Polymer

### Material Notes:

LNP\* Stat-loy\* AF3009 is a compound based on Acrylonitrile Butadiene Styrene resin containing Glass Fiber, Flame Retardant. Added features of this material include: Antistat, Flame Retardant.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-STAT-LOY-AF3009-ABS-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-STAT-LOY-AF3009-ABS-Asia-Pacific.php)

| Physical Properties               | Metric               | English                   | Comments                  |
|-----------------------------------|----------------------|---------------------------|---------------------------|
| Density                           | 1.31 g/cc            | 0.0473 lb/in <sup>3</sup> | ASTM D792                 |
|                                   | 1.31 g/cc            | 0.0473 lb/in <sup>3</sup> | ISO 1183                  |
| Moisture Absorption               | 2.00 %               | 2.00 %                    | 50% RH, 24 hrs; ASTM D570 |
| Linear Mold Shrinkage, Flow       | 0.0080 - 0.010 cm/cm | 0.0080 - 0.010 in/in      | ASTM D955                 |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                           |
|                                   | 0.0093 cm/cm         | 0.0093 in/in              | ISO 294                   |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                           |
| Linear Mold Shrinkage, Transverse | 0.0090 - 0.011 cm/cm | 0.0090 - 0.011 in/in      | ASTM D955                 |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                           |
|                                   | 0.010 cm/cm          | 0.010 in/in               | ISO 294                   |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                           |

| Mechanical Properties     | Metric   | English  | Comments                    |
|---------------------------|----------|----------|-----------------------------|
| Tensile Strength at Break | 42.0 MPa | 6090 psi | ASTM D638                   |
|                           | 42.0 MPa | 6090 psi | Type I, 5 mm/min; ASTM D638 |
|                           | 42.0 MPa | 6090 psi | ISO 527                     |
|                           | 42.0 MPa | 6090 psi | 5 mm/min; ISO 527           |
| Tensile Strength, Yield   | 42.0 MPa | 6090 psi | ASTM D638                   |
|                           | 43.0 MPa | 6240 psi | Type I, 5 mm/min; ASTM D638 |
|                           | 43.0 MPa | 6240 psi | ISO 527                     |
|                           | 43.0 MPa | 6240 psi | 5 mm/min; ISO 527           |
| Elongation at Break       | 1.8 %    | 1.8 %    | ISO 527                     |

| Mechanical Properties        | 1.9 %<br>Metric        | 1.9 %<br>English           | 5 mm/min; ISO 527<br>Comments                 |
|------------------------------|------------------------|----------------------------|-----------------------------------------------|
|                              | 1.9 %                  | 1.9 %                      | ASTM D638                                     |
|                              | 2.0 %                  | 2.0 %                      | Type I, 5 mm/min; ASTM D638                   |
| Elongation at Yield          | 1.8 %                  | 1.8 %                      | ASTM D638                                     |
|                              | 1.8 %                  | 1.8 %                      | Type I, 5 mm/min; ASTM D638                   |
|                              | 1.8 %                  | 1.8 %                      | ISO 527                                       |
|                              | 1.8 %                  | 1.8 %                      | 5 mm/min; ISO 527                             |
| Tensile Modulus              | 3.62 GPa               | 525 ksi                    | 1 mm/min; ISO 527                             |
|                              | 4.13 GPa               | 599 ksi                    | 50 mm/min; ASTM D638                          |
| Flexural Strength            | 55.0 MPa               | 7980 psi                   | ASTM D790                                     |
|                              | 59.0 MPa               | 8560 psi                   | 1.3 mm/min, 50 mm span; ASTM D790             |
|                              | 61.0 MPa               | 8850 psi                   | ISO 178                                       |
| Flexural Yield Strength      | 61.0 MPa               | 8850 psi                   | 2 mm/min; ISO 178                             |
| Flexural Modulus             | 3.20 GPa               | 464 ksi                    | ISO 178                                       |
|                              | 3.20 GPa               | 464 ksi                    | 2 mm/min; ISO 178                             |
|                              | 3.44 GPa               | 499 ksi                    | ASTM D790                                     |
|                              | 3.45 GPa               | 500 ksi                    | 1.3 mm/min, 50 mm span; ASTM D790             |
| Izod Impact, Notched         | 0.320 J/cm             | 0.599 ft-lb/in             | ASTM D256                                     |
| Izod Impact, Unnotched       | 2.24 J/cm              | 4.20 ft-lb/in              | ASTM D4812                                    |
| Izod Impact, Notched (ISO)   | 3.00 kJ/m <sup>2</sup> | 1.43 ft-lb/in <sup>2</sup> | 80*10*4; ISO 180/1A                           |
| Izod Impact, Unnotched (ISO) | 15.0 kJ/m <sup>2</sup> | 7.14 ft-lb/in <sup>2</sup> | 80*10*4; ISO 180/1U                           |
| Dart Drop, Total Energy      | 4.00 J                 | 2.95 ft-lb                 | Instrumented Impact Energy @ peak; ASTM D3763 |
| Impact Test                  | 1.00 J                 | 0.738 ft-lb                | Multiaxial Impact; ISO 6603                   |

| Thermal Properties            | Metric                                          | English                                          | Comments   |
|-------------------------------|-------------------------------------------------|--------------------------------------------------|------------|
| CTE, linear, Parallel to Flow | 93.6 Âµm/m-Â°C<br>@Temperature -40.0 - 40.0 Â°C | 52.0 Âµin/in-Â°F<br>@Temperature -40.0 - 104 Â°F | ASTM E 831 |

| Thermal Properties                          | 94.0 Âµm/m-Â°C<br>Metric      | 52.2 Âµin/in-Â°F<br>English  | Comments<br>ISO 11359-2          |
|---------------------------------------------|-------------------------------|------------------------------|----------------------------------|
|                                             | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |                                  |
|                                             | 94.0 Âµm/m-Â°C                | 52.2 Âµin/in-Â°F             | ISO 11359-2                      |
|                                             | @Temperature 23.0 - 60.0 Â°C  | @Temperature 73.4 - 140 Â°F  |                                  |
| CTE, linear, Transverse to Flow             | 61.2 Âµm/m-Â°C                | 34.0 Âµin/in-Â°F             | ASTM E 831                       |
|                                             | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |                                  |
|                                             | 62.0 Âµm/m-Â°C                | 34.4 Âµin/in-Â°F             | ISO 11359-2                      |
|                                             | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |                                  |
|                                             | 62.0 Âµm/m-Â°C                | 34.4 Âµin/in-Â°F             | ISO 11359-2                      |
|                                             | @Temperature 23.0 - 60.0 Â°C  | @Temperature 73.4 - 140 Â°F  |                                  |
| Deflection Temperature at 0.46 MPa (66 psi) | 98.0 Â°C                      | 208 Â°F                      | Flatw 80*10*4 sp=64mm; ISO 75/Bf |
|                                             | 96.0 Â°C                      | 205 Â°F                      | unannealed; ASTM D648            |
|                                             | @Thickness 3.20 mm            | @Thickness 0.126 in          |                                  |
| Deflection Temperature at 1.8 MPa (264 psi) | 90.0 Â°C                      | 194 Â°F                      | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|                                             | 87.0 Â°C                      | 189 Â°F                      | unannealed; ASTM D648            |
|                                             | @Thickness 3.20 mm            | @Thickness 0.126 in          |                                  |
| Flammability, UL94                          | V-0                           | V-0                          | UL 94 by SABIC-IP                |
|                                             | @Thickness 1.50 mm            | @Thickness 0.0591 in         |                                  |
|                                             | V-0                           | V-0                          | UL 94                            |
|                                             | @Thickness 1.50 mm            | @Thickness 0.0591 in         |                                  |

| Electrical Properties | Metric        | English       | Comments  |
|-----------------------|---------------|---------------|-----------|
| Surface Resistance    | 10 - 1000 ohm | 10 - 1000 ohm | ASTM D257 |

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