

# DuraGrip® DGR 6140NC

Thermoplastic Elastomer

Advanced Polymer Alloys

## Message:

DuraGrip® 6140NC is an enhanced bonding and adhesion grade Thermoplastic Elastomer (TPE) designed for injection molding and extrusion processes. It will bond well with polycarbonate, polycarbonate alloys, ABS, ASA, acrylics, cellulotics, and some nylons in insert molding, coinjection molding and coextrusion processes. DuraGrip® 6140NC is hygroscopic and requires drying at 150°F for 3-4 hours for optimum aesthetics, properties and adhesion.

| General Information |  |
|---------------------|--|
| Features            | Good adhesion  |
| Agency Ratings      | EU 2002/96/EC (WEEE)                                   |
| RoHS Compliance     | RoHS compliance  |
| Appearance          | Natural color  |
| Forms               | Particle   |
| Processing Method   | Co-extrusion molding<br>Extrusion<br>Injection molding |

| Physical         | Nominal Value | Unit              | Test Method         |
|------------------|---------------|-------------------|---------------------|
| Specific Gravity | 1.03          | g/cm <sup>3</sup> | ASTM D792, ISO 1183 |

| Hardness                            | Nominal Value | Unit | Test Method         |
|-------------------------------------|---------------|------|---------------------|
| Durometer Hardness (Shore A, 5 sec) | 45            |      | ASTM D2240, ISO 868 |

| Elastomers                 | Nominal Value | Unit | Test Method       |
|----------------------------|---------------|------|-------------------|
| Tensile Stress             |               |      | ASTM D412, ISO 37 |
| 100% strain                | 1.17          | MPa  | ASTM D412, ISO 37 |
| 300% strain                | 2.07          | MPa  | ASTM D412, ISO 37 |
| Tensile Strength (Yield)   | 2.96          | MPa  | ASTM D412, ISO 37 |
| Tensile Elongation (Break) | 410           | %    | ASTM D412, ISO 37 |
| Tear Strength <sup>1</sup> | 16.5          | kN/m | ASTM D624         |

| Fill Analysis                                  | Nominal Value | Unit   | Test Method |
|--|---------------|--------|-------------|
| Melt Viscosity (190°C, 294 sec <sup>-1</sup> ) | 374           | Pa · s | ASTM D3835  |

## Additional Information

The value listed as Density -Specific Gravity, ASTM D792, was tested in accordance with ASTM D471. The value listed as Density, ISO 1183, was tested in accordance with ISO 2781.

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Rear Temperature       | 204 - 221     | °C   |
| Middle Temperature     | 216 - 227     | °C   |
| Front Temperature      | 227 - 238     | °C   |
| Nozzle Temperature     | 227 - 249     | °C   |
| Processing (Melt) Temp | 227 - 254     | °C   |
| Mold Temperature       | 43.3 - 54.4   | °C   |

|  |             |     |
|--|-------------|-----|
| Injection Pressure   | 2.76 - 5.52 | MPa |
| Screw Speed  | 50 - 150    | rpm |
| Injection instructions   |             |     |
| Injection Speed: 1 to 3 in <sup>3</sup> /secInjection Time (1st Stage/Boost): 0.5 to 4 secSecond Stage Pressure: 300 to 500 psiSecond Stage Time: 3 to 10 secCooling Time: 10 to 25 secBack Pressure: 25 to 75 % |             |     |
| NOTE   |             |     |
| 1.   | C mould     |     |

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