

# LNP™ COLORCOMP™ MG38C compound

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

## Message:

LNP\* COLORCOMP\* MG38C is a compound based on ABS. Added features of this grade include: Very high impact, toughness/rigidity, good fatigue resistance.

Also known as: LNP\* COLORCOMP\* Compound MG38

Product reorder name: MG38C

| General Information                |                              |                   |                 |
|------------------------------------|------------------------------|-------------------|-----------------|
| UL YellowCard                      | E121562-102809590            | E121562-102809591 |                 |
| Features                           | Ultra-high impact resistance |                   |                 |
|                                    | Fatigue resistance           |                   |                 |
| Processing Method                  | Injection molding            |                   |                 |
| Physical                           | Nominal Value                | Unit              | Test Method     |
| Specific Gravity                   |                              |                   |                 |
| --                                 | 1.05                         | g/cm³             | ASTM D792       |
| --                                 | 1.04                         | g/cm³             | ISO 1183        |
| Melt Mass-Flow Rate (MFR)          |                              |                   |                 |
| 230°C/3.8 kg                       | 3.7                          | g/10 min          | ASTM D1238      |
| 220°C/10.0 kg                      | 14                           | g/10 min          | ISO 1133        |
| Molding Shrinkage - Flow (3.20 mm) | 0.50 - 0.80                  | %                 | Internal method |
| Hardness                           | Nominal Value                | Unit              | Test Method     |
| Rockwell Hardness (R-Scale)        | 111                          |                   | ASTM D785       |
| Mechanical                         | Nominal Value                | Unit              | Test Method     |
| Tensile Modulus                    |                              |                   |                 |
| -- <sup>1</sup>                    | 2270                         | MPa               | ASTM D638       |
| --                                 | 2270                         | MPa               | ISO 527-2/1     |
| Tensile Strength                   |                              |                   |                 |
| Yield <sup>2</sup>                 | 44.0                         | MPa               | ASTM D638       |
| Yield                              | 47.0                         | MPa               | ISO 527-2/50    |
| Fracture <sup>3</sup>              | 33.0                         | MPa               | ASTM D638       |
| Fracture                           | 34.0                         | MPa               | ISO 527-2/50    |
| Tensile Elongation                 |                              |                   |                 |
| Yield <sup>4</sup>                 | 2.1                          | %                 | ASTM D638       |
| Yield                              | 2.7                          | %                 | ISO 527-2/50    |
| Fracture <sup>5</sup>              | 26                           | %                 | ASTM D638       |
| Fracture                           | 17                           | %                 | ISO 527-2/50    |
| Flexural Modulus                   |                              |                   |                 |
| 50.0mm span <sup>6</sup>           | 2340                         | MPa               | ASTM D790       |

|                                                 |               |                   |                                          |
|-------------------------------------------------|---------------|-------------------|------------------------------------------|
| -- <sup>7</sup>                                 | 2250          | MPa               | ISO 178                                  |
| Flexural Stress                                 |               |                   |                                          |
| --                                              | 71.0          | MPa               | ISO 178                                  |
| Yield, 50.0mm span <sup>8</sup>                 | 72.0          | MPa               | ASTM D790                                |
| Impact                                          | Nominal Value | Unit              | Test Method                              |
| Charpy Notched Impact Strength <sup>9</sup>     |               |                   | ISO 179/1eA                              |
| -30°C                                           | 10            | kJ/m <sup>2</sup> | ISO 179/1eA                              |
| 23°C                                            | 28            | kJ/m <sup>2</sup> | ISO 179/1eA                              |
| Notched Izod Impact                             |               |                   |                                          |
| 23°C                                            | 370           | J/m               | ASTM D256                                |
| -30°C <sup>10</sup>                             | 9.0           | kJ/m <sup>2</sup> | ISO 180/1A                               |
| 23°C <sup>11</sup>                              | 27            | kJ/m <sup>2</sup> | ISO 180/1A                               |
| Instrumented Dart Impact (23°C, Total Energy)   | 31.0          | J                 | ASTM D3763                               |
| Thermal                                         | Nominal Value | Unit              | Test Method                              |
| Deflection Temperature Under Load               |               |                   |                                          |
| 0.45 MPa, unannealed, 3.20mm                    | 95.0          | °C                | ASTM D648                                |
| 1.8 MPa, unannealed, 3.20mm                     | 80.0          | °C                | ASTM D648                                |
| 1.8 MPa, unannealed, 64.0mm span <sup>12</sup>  | 81.0          | °C                | ISO 75-2/Af                              |
| Vicat Softening Temperature                     |               |                   |                                          |
| --                                              | 98.0          | °C                | ASTM D1525, ISO 306/B50 11 <sup>13</sup> |
| --                                              | 100           | °C                | ISO 306/B120                             |
| Linear thermal expansion coefficient            |               |                   | ASTM E831                                |
| Flow: -40 to 40°C                               | 8.8E-5        | cm/cm/°C          | ASTM E831                                |
| Lateral: -40 to 40°C                            | 8.6E-5        | cm/cm/°C          | ASTM E831                                |
| RTI Elec                                        | 60.0          | °C                | UL 746                                   |
| RTI Imp                                         | 60.0          | °C                | UL 746                                   |
| RTI                                             | 60.0          | °C                | UL 746                                   |
| Electrical                                      | Nominal Value |                   | Test Method                              |
| Arc Resistance <sup>14</sup>                    | PLC 5         |                   | ASTM D495                                |
| Comparative Tracking Index (CTI)                | PLC 0         |                   | UL 746                                   |
| High Amp Arc Ignition (HAI)                     | PLC 0         |                   | UL 746                                   |
| High Voltage Arc Tracking Rate (HVTR)           | PLC 2         |                   | UL 746                                   |
| Hot-wire Ignition (HWI)                         | PLC 3         |                   | UL 746                                   |
| Flammability                                    | Nominal Value |                   | Test Method                              |
| Flame Rating (1.5 mm)                           | HB            |                   | UL 94                                    |
| Fill Analysis                                   | Nominal Value | Unit              | Test Method                              |
| Melt Viscosity (240°C, 1000 sec <sup>-1</sup> ) | 245           | Pa · s            | ASTM D3835                               |
| Injection                                       | Nominal Value | Unit              |                                          |
| Drying Temperature                              | 82 - 93       | °C                |                                          |
| Drying Time                                     | 2.0 - 4.0     | hr                |                                          |
| Drying Time, Maximum                            | 8.0           | hr                |                                          |

|                        |               |     |
|------------------------|---------------|-----|
| Suggested Max Moisture | 0.10          | %   |
| Suggested Shot Size    | 50 - 70       | %   |
| Rear Temperature       | 188 - 210     | °C  |
| Middle Temperature     | 204 - 227     | °C  |
| Front Temperature      | 216 - 238     | °C  |
| Nozzle Temperature     | 218 - 260     | °C  |
| Processing (Melt) Temp | 218 - 260     | °C  |
| Mold Temperature       | 49 - 71       | °C  |
| Back Pressure          | 0.345 - 0.689 | MPa |
| Screw Speed            | 30 - 60       | rpm |
| Vent Depth             | 0.038 - 0.051 | mm  |

#### NOTE

|     |                           |
|-----|---------------------------|
| 1.  | 5.0 mm/min                |
| 2.  | Type 1, 5.0 mm/min        |
| 3.  | Type 1, 5.0 mm/min        |
| 4.  | Type 1, 5.0 mm/min        |
| 5.  | Type 1, 5.0 mm/min        |
| 6.  | 1.3 mm/min                |
| 7.  | 2.0 mm/min                |
| 8.  | 1.3 mm/min                |
| 9.  | 80*10*4 sp=62mm           |
| 10. | 80*10*4                   |
| 11. | 80*10*4                   |
| 12. | 80*10*4 mm                |
| 13. | 标准 B (120°C/h), 载荷2 (50N) |
| 14. | Tungsten electrode        |

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