

# Borcom™ BG055AI

Polypropylene

Borealis AG

## Message:

Borcom BG055AI is a polypropylene microcomposite intended for injection and back injection moulding.

This material has an excellent balance between impact strength and stiffness, high melt flow rate and gives a good surface quality.

| General Information                  |                                    |                   |                 |
|--------------------------------------|------------------------------------|-------------------|-----------------|
| UL YellowCard                        | E108112-320758                     |                   |                 |
| Additive                             | heat stabilizer                    |                   |                 |
| Features                             | Rigid, good                        |                   |                 |
|                                      | Impact resistance, good            |                   |                 |
|                                      | High liquidity                     |                   |                 |
|                                      | Thermal Stability                  |                   |                 |
|                                      | Excellent appearance               |                   |                 |
| Uses                                 | Electrical/Electronic Applications |                   |                 |
|                                      | Household goods                    |                   |                 |
|                                      | Application in Automobile Field    |                   |                 |
|                                      | Car interior parts                 |                   |                 |
|                                      | Shell                              |                   |                 |
| UL File Number                       | E108112                            |                   |                 |
| Forms                                | Particle                           |                   |                 |
| Processing Method                    | Injection molding                  |                   |                 |
| Physical                             | Nominal Value                      | Unit              | Test Method     |
| Density                              | 0.920                              | g/cm <sup>3</sup> | ISO 1183        |
| Melt Mass-Flow Rate (MFR)            |                                    |                   | ISO 1133        |
| 230°C/2.16 kg                        | 22                                 | g/10 min          | ISO 1133        |
| 230°C/5.0 kg                         | 96                                 | g/10 min          | ISO 1133        |
| Molding Shrinkage (2.00 mm)          | 1.5                                | %                 | Internal method |
| Hardness                             | Nominal Value                      | Unit              | Test Method     |
| Ball Indentation Hardness (H 358/30) | 90.0                               | MPa               | ISO 2039-1      |
| Mechanical                           | Nominal Value                      | Unit              | Test Method     |
| Tensile Modulus                      | 2000                               | MPa               | ISO 527-2/1     |
| Tensile Stress (Yield)               | 35.0                               | MPa               | ISO 527-2/50    |
| Flexural Modulus <sup>1</sup>        | 1850                               | MPa               | ISO 178         |
| Flexural Stress                      | 45.0                               | MPa               | ISO 178         |
| Impact                               | Nominal Value                      | Unit              | Test Method     |
| Charpy Notched Impact Strength       |                                    |                   | ISO 179/1eA     |

| -20°C                                                                                  | 1.5           | kJ/m <sup>2</sup> | ISO 179/1eA |
|----------------------------------------------------------------------------------------|---------------|-------------------|-------------|
| 23°C                                                                                   | 3.5           | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy Unnotched Impact Strength                                                       |               |                   | ISO 179/1eU |
| -20°C                                                                                  | 30            | kJ/m <sup>2</sup> | ISO 179/1eU |
| 23°C                                                                                   | 100           | kJ/m <sup>2</sup> | ISO 179/1eU |
| Notched Izod Impact                                                                    |               |                   | ISO 180     |
| -20°C                                                                                  | 1.5           | kJ/m <sup>2</sup> | ISO 180     |
| 23°C                                                                                   | 3.5           | kJ/m <sup>2</sup> | ISO 180     |
| Unnotched Izod Impact Strength                                                         |               |                   | ISO 180     |
| -20°C                                                                                  | 18            | kJ/m <sup>2</sup> | ISO 180     |
| 23°C                                                                                   | 60            | kJ/m <sup>2</sup> | ISO 180     |
| Thermal                                                                                | Nominal Value | Unit              | Test Method |
| Heat Deflection Temperature                                                            |               |                   |             |
| 0.45 MPa, not annealed                                                                 | 108           | °C                | ISO 75-2/B  |
| 1.8 MPa, not annealed                                                                  | 60.0          | °C                | ISO 75-2/A  |
| Vicat Softening Temperature                                                            |               |                   |             |
| --                                                                                     | 156           | °C                | ISO 306/A50 |
| --                                                                                     | 95.0          | °C                | ISO 306/B50 |
| Flammability                                                                           | Nominal Value | Unit              | Test Method |
| Atomization-16 hrs (100°C)                                                             | 1.1           | mg                | DIN 75201   |
| Emission                                                                               |               | µg/g              | VDA 277     |
| Injection                                                                              | Nominal Value | Unit              |             |
| Hopper Temperature                                                                     | 40.0 - 80.0   | °C                |             |
| Processing (Melt) Temp                                                                 | 220 - 260     | °C                |             |
| Mold Temperature                                                                       | 30.0 - 50.0   | °C                |             |
| Holding Pressure                                                                       | 30.0 - 60.0   | MPa               |             |
| Injection instructions                                                                 |               |                   |             |
| Back pressure: Low to mediumScrew speed: Low to mediumFlow front speed: 100 - 200 mm/s |               |                   |             |
| NOTE                                                                                   |               |                   |             |
| 1.                                                                                     | 2.0 mm/min    |                   |             |

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