

# Grilon® BGM-30 X

Polyamide 6  
EMS-GRIVORY

Message:

Grilon® BGM-30 X is a Polyamide 6 (Nylon 6) material filled with 30% glass\mineral. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for injection molding.  
Important attributes of Grilon® BGM-30 X are:  
Flame Rated  
RoHS Compliant  
Typical application of Grilon® BGM-30 X: Automotive

| General Information              |      |                                    |       |             |
|----------------------------------|------|------------------------------------|-------|-------------|
| Filler / Reinforcement           |      | Glass\Mineral,30% Filler by Weight |       |             |
| Uses                             |      | Automotive Applications            |       |             |
| RoHS Compliance                  |      | RoHS Compliant                     |       |             |
| Forms                            |      | Granules                           |       |             |
| Processing Method                |      | Injection Molding                  |       |             |
| Physical                         | Dry  | Conditioned                        | Unit  | Test Method |
| Density                          | 1.38 | --                                 | g/cm³ | ISO 1183    |
| Molding Shrinkage                |      |                                    |       | ISO 294-4   |
| Across Flow                      | 0.80 | --                                 | %     |             |
| Flow                             | 0.30 | --                                 | %     |             |
| Water Absorption                 |      |                                    |       | ISO 62      |
| Saturation, 23°C                 | 8.0  | --                                 | %     |             |
| Equilibrium, 23°C, 50% RH        | 2.5  | --                                 | %     |             |
| Hardness                         | Dry  | Conditioned                        | Unit  | Test Method |
| Ball Indentation Hardness        | 205  | 90.0                               | MPa   | ISO 2039-1  |
| Mechanical                       | Dry  | Conditioned                        | Unit  | Test Method |
| Tensile Modulus                  | 6500 | 2300                               | MPa   | ISO 527-2   |
| Tensile Stress (Break)           | 105  | 45.0                               | MPa   | ISO 527-2   |
| Tensile Strain (Break)           | 3.0  | 15                                 | %     | ISO 527-2   |
| Impact                           | Dry  | Conditioned                        | Unit  | Test Method |
| Charpy Notched Impact Strength   |      |                                    |       | ISO 179/1eA |
| -30°C                            | 3.0  | 3.0                                | kJ/m² |             |
| 23°C                             | 4.0  | 10                                 | kJ/m² |             |
| Charpy Unnotched Impact Strength |      |                                    |       | ISO 179/1eU |
| -30°C                            | 40   | 35                                 | kJ/m² |             |
| 23°C                             | 40   | 60                                 | kJ/m² |             |
| Thermal                          | Dry  | Conditioned                        | Unit  | Test Method |

|                                        |                                |             |          |                      |
|----------------------------------------|--------------------------------|-------------|----------|----------------------|
| Heat Deflection Temperature            |                                |             |          |                      |
| 1.8 MPa, Unannealed                    | 175                            | --          | °C       | ISO 75-2/A           |
| 8.0 MPa, Unannealed                    | 50.0                           | --          | °C       | ISO 75-2/C           |
| Continuous Use Temperature             |                                |             |          | Internal Method      |
| -- <sup>1</sup>                        | 100 to 120                     | --          | °C       |                      |
| -- <sup>2</sup>                        | 180                            | --          | °C       |                      |
| Melting Temperature <sup>3</sup>       | 222                            | --          | °C       | ISO 11357-3          |
| CLTE                                   |                                |             |          | ISO 11359-2          |
| Flow                                   | 3.5E-5                         | --          | cm/cm/°C |                      |
| Transverse                             | 7.0E-5                         | --          | cm/cm/°C |                      |
| Electrical                             | Dry                            | Conditioned | Unit     | Test Method          |
| Surface Resistivity                    | --                             | 1.0E+12     | ohms     | IEC 60093            |
| Volume Resistivity                     | 1.0E+14                        | 1.0E+12     | ohms·cm  | IEC 60093            |
| Electric Strength                      | 34                             | 30          | kV/mm    | IEC 60243-1          |
| Comparative Tracking Index             | --                             | 500         | V        | IEC 60112            |
| Flammability                           | Dry                            | Conditioned | Unit     | Test Method          |
| Flammability Classification (0.800 mm) | HB                             | --          |          | IEC 60695-11-10, -20 |
| Additional Information                 | Dry                            | Conditioned |          | Test Method          |
| ISO Type                               | PA 6, MHR, 14-060N, (GF+MD)30X |             |          | ISO 1874             |
| NOTE                                   |                                |             |          |                      |
| 1.                                     | Long Term                      |             |          |                      |
| 2.                                     | Short Term                     |             |          |                      |
| 3.                                     | 10°C/min                       |             |          |                      |

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