

# Grilamid® 2D 25 W 20 X black

Polyamide 612

EMS-GRIVORY

Message:

Grilamid® 2D 25 W 20 X black is a Polyamide 612 (Nylon 612) material. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for extrusion or profile extrusion.

Important attributes of Grilamid® 2D 25 W 20 X black are:

Flame Rated

Good Flexibility

Heat Resistant

High Viscosity

Impact Modified

Typical applications include:

Automotive

Hose/Tubing

| General Information |                                                                                                                                                     |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Additive            | Impact Modifier<br>Plasticizer                                                                                                                      |
| Features            | Good Flexibility<br>High Heat Resistance<br>High Impact Resistance<br>High Viscosity<br>Hydrolysis Resistant<br>Impact Modified<br>Light Stabilized |
| Uses                | Automotive Applications<br>Hydraulic Applications<br>Tubing                                                                                         |
| Appearance          | Natural Color                                                                                                                                       |
| Forms               | Granules                                                                                                                                            |
| Processing Method   | Extrusion<br>Profile Extrusion                                                                                                                      |

| Physical                  | Dry  | Conditioned | Unit              | Test Method |
|---------------------------|------|-------------|-------------------|-------------|
| Density                   | 1.04 | --          | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption          |      |             |                   | ISO 62      |
| Saturation, 23°C          | 2.1  | --          | %                 |             |
| Equilibrium, 23°C, 50% RH | 0.90 | --          | %                 |             |
| Hardness                  | Dry  | Conditioned | Unit              | Test Method |

|                                        |                      |                    |                   |                      |
|----------------------------------------|----------------------|--------------------|-------------------|----------------------|
| Ball Indentation Hardness              | 39.0                 | 30.0               | MPa               | ISO 2039-1           |
| <b>Mechanical</b>                      | <b>Dry</b>           | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Tensile Modulus                        | 600                  | 400                | MPa               | ISO 527-2            |
| Tensile Stress (50% Strain)            | 30.0                 | 25.0               | MPa               | ISO 527-2            |
| Tensile Strain (Break)                 | > 50                 | > 50               | %                 | ISO 527-2            |
| <b>Impact</b>                          | <b>Dry</b>           | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Charpy Notched Impact Strength         |                      |                    |                   | ISO 179/1eA          |
| -30°C                                  | 15                   | 13                 | kJ/m <sup>2</sup> |                      |
| 23°C                                   | No Break             | No Break           |                   |                      |
| Charpy Unnotched Impact Strength       |                      |                    |                   | ISO 179/1eU          |
| -30°C                                  | No Break             | No Break           |                   |                      |
| 23°C                                   | No Break             | No Break           |                   |                      |
| <b>Thermal</b>                         | <b>Dry</b>           | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Heat Deflection Temperature            |                      |                    |                   |                      |
| 0.45 MPa, Unannealed                   | 115                  | --                 | °C                | ISO 75-2/B           |
| 1.8 MPa, Unannealed                    | 50.0                 | --                 | °C                | ISO 75-2/A           |
| Melting Temperature <sup>1</sup>       | 210                  | --                 | °C                | ISO 11357-3          |
| CLTE                                   |                      |                    |                   | ISO 11359-2          |
| Flow                                   | 2.0E-4               | --                 | cm/cm/°C          |                      |
| Transverse                             | 1.2E-4               | --                 | cm/cm/°C          |                      |
| <b>Electrical</b>                      | <b>Dry</b>           | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Surface Resistivity                    | --                   | 1.0E+10            | ohms              | IEC 60093            |
| Volume Resistivity                     | 1.0E+10              | 1.0E+10            | ohms·cm           | IEC 60093            |
| Electric Strength                      | 37                   | 37                 | kV/mm             | IEC 60243-1          |
| Comparative Tracking Index             | --                   | 600                | V                 | IEC 60112            |
| <b>Flammability</b>                    | <b>Dry</b>           | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Flammability Classification (0.800 mm) | HB                   | --                 |                   | IEC 60695-11-10, -20 |
| <b>Additional Information</b>          | <b>Dry</b>           | <b>Conditioned</b> |                   | <b>Test Method</b>   |
| ISO Type                               | PA612-HIP, E, 22-005 | --                 |                   | ISO 1874             |
| <b>NOTE</b>                            |                      |                    |                   |                      |
| 1.                                     | 10°C/min             |                    |                   |                      |

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