TECHNICAL DATASHEET

# Grilamid XE 4076 black 9992

PA12-I

EMS-GRIVORY
Material Database

**Physical**
Low moisture absorption, Low density

**Chemical**
Good chemical resistance

**Mechanical**
Good cold impact resistance

**Processing**
Other extrusion

**Delivery form**
Granules

**Special Characteristics**
Light stabilized or stable to light

**Regional Availability**
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

## Product Information

Product-nomenclature: ISO 16396-(PA12+PA6XY)-I,,EHL,C12-007

| Mechanical Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Tensile modulus | 650 / 450 | MPa | ISO 527 |
| Stress at 50% strain | 20 / 20 | MPa | ISO 527 |
| Strain at break | >50 / >50 | % | ISO 527 |
| Charpy impact strength, +23°C | N / N | kJ/m² | ISO 179/1eU |
| Charpy impact strength, -30°C | N / N | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength, +23°C | N / N | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 70 / 80 | kJ/m² | ISO 179/1eA |
| Ball indentation hardness | 35 / 25 | MPa | ISO 2039-1 |

| Thermal Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Melting temperature, 10°C/min | 207 / - | °C | ISO 11357-1/-3 |
| Temp. of deflection under load, 1.80 MPa | 40 / - | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 0.45 MPa | 90 / - | °C | ISO 75-1/-2 |
| Max. usage temperature (long term) | 110 | °C | ISO 2578 |
| Max. usage temperature (short term) | 150 | °C | EMS |

| Electrical Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Electric strength | 35 / 35 | kV/mm | IEC 60243-1 |
| Comparative tracking index | - / 600 | | IEC 60112 |
| Volume resistivity | 1E10 / 1E11 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity | - / 1E11 | Ohm | IEC 62631-3-2 |

| General Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Density | 1000 / - | kg/m³ | ISO 1183 |
| Burning behav. at thickness h | HB / - | class | IEC 60695-11-10 |

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| General Properties | dry/cond | Unit | Standard |
|---|---|---|---|
| Thickness tested | 0.8 / - | mm | |
| Water absorption | 2.8 / - | % | Sim. to ISO 62 |
| Humidity absorption | 0.9 / - | % | Sim. to ISO 62 |
| Molding shrinkage, parallel | 1.8 / - | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 1.3 / - | % | ISO 294-4, 2577 |

| Processing Extrusion | Value | Unit | Standard |
|---|---|---|---|
| Length | 24 - 26 | mm | |
| Compression ratio | 2 - 3 | | |
| Hopper zone | 60 - 90 | °C | |
| Conveying zone | 220 - 240 | °C | |
| Compression zone | 230 - 250 | °C | |
| Metering zone | 230 - 250 | °C | |
| Melt | 240 - 270 | °C | |
| Die | 230 - 250 | °C | |
| Adapter | 230 - 260 | °C | |

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