

Item Description

Item ID

PRE-ELEC[®] PP 18220
PP18220

PP extrusion compound
Semiconductive
Surface quality

Typical end product
Cables

Applications
Conductor screen
Insulator screen

PRE-ELEC[®] PP 18220 is a semiconductive thermoplastic compound based on polypropylene for cable applications with good low temperature properties. The compound features premium surface quality and dispersion of carbon black. It is easy to extrude with high and consistent level of quality.

| Special properties | Unit | Value | Method |
|----------------------------|-------------------|-------|-------------|
| Volume resistivity(*) | Ω.cm | 25 | PRE021 |
| General properties | Unit | Value | Method |
| Specific gravity | g/cm ³ | 0,99 | ISO 1183 |
| Melt flow rate at 230°C | g/10 min | | ISO 1133 |
| 10.0 kg | | 3,2 | |
| Vicat, Rate A | °C | 97 | ISO 306/A50 |
| HDT, 0.45 MPa | °C | 51 | ISO 75/Bf |
| HDT, 1.80 MPa | °C | 42 | ISO 75/Af |
| Mechanical properties | Unit | Value | Method |
| Tensile strength(*) | MPa | 35 | ISO 527 |
| Tensile strain at break(*) | % | 400 | ISO 527 |
| Flexural modulus(*) | MPa | 220 | ISO 178 |
| Tensile modulus | MPa | 275 | ISO 527 |
| Unnotched, -20°C | | NB | |
| Notched, -20°C | | 84 | |
| Hardness, Shore D(*) | - | 51 | ISO 868 |

MFR is measured from granulates. Tensile test speed: 25 mm/min, Sample test length 50mm

Test specimen: Injection moulded rod; ISO 527 TYPE 1A; Thickness: 10 mm, width: 4 mm

(* extruded tape; ISO 527-2 Type 5A, thickness 400 - 800 µm

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www.premixgroup.com/data-center/

Processing instructions

| | | Unit | Processing range | | |
|-----------|------------------------------|------|------------------|---|-----|
| Extrusion | Cylinder temperature profile | °C | 170 | - | 210 |
| | Die temperature profile | °C | 180 | - | 230 |
| | Tool/Roll temperature | °C | 90 | - | 60 |

Notes

Drying of the product is recommended for 2-4 hours at 60-80°C prior to use.

These parameters are for guidance only. The process parameters should always be optimized for the used equipment. The instructions of the equipment manufacturer should be followed. Caution should be taken when handling molten material as it is extremely hot and may cause severe burns.

Storage

Product-specific details are mentioned in the notes above. The general minimum shelf life for Premix's product is 3 years with the following conditions: 1) original package is unopened, 2) the storage area and conditions provide protection from direct sunlight and significant changes in storage temperature, 3) the product is pre-dried accordingly before use.

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