

# PRE-ELEC<sup>®</sup> PA 1408

PA6 injection moulding compound  
Electrically conductive

Applications: Technical parts  
Housings, Enclosures

PRE-ELEC<sup>®</sup> PA 1408 is a conductive thermoplastic compound based on polyamide 6. Conductivity is achieved by using conductive carbon black. In addition to a low electrical resistivity it has an excellent balance of mechanical properties and is easy to injection mould.

| Special properties | Unit | Value | Method        |
|--------------------|------|-------|---------------|
| Volume resistivity | Ω.cm | 700   | PRE021        |
| Surface resistance | Ω    | 2E+03 | IEC 61340-2-3 |

| General properties                 | Unit              | Value | Method      |
|------------------------------------|-------------------|-------|-------------|
| Specific gravity                   | g/cm <sup>3</sup> | 1.20  | ISO 1183    |
| Melt flow rate at 275°C<br>10.0 kg | g/10 min          | 5.0   | ISO 1133    |
| Mould shrinkage                    | %                 | 1.6   | ISO 294-4   |
| Vicat, Rate A                      | °C                | 220   | ISO 306/A50 |
| Vicat, Rate B                      | °C                | 190   | ISO 306/B50 |
| HDT, 0.45 MPa                      | °C                | 155   | ISO 75/Bf   |
| HDT, 1.80 MPa                      | °C                | 65    | ISO 75/Af   |

| Mechanical properties   | Unit              | Value | Method  |
|-------------------------|-------------------|-------|---------|
| Tensile strength        | MPa               | 50    | ISO 527 |
| Tensile strain at break | %                 | 25    | ISO 527 |
| Flexural modulus        | MPa               | 2000  | ISO 178 |
| Impact strength, Charpy | kJ/m <sup>2</sup> |       | ISO 179 |
| Unnotched, +23°C        |                   | NB    |         |
| Notched, +23°C          |                   | 70    |         |
| Unnotched, -20°C        |                   | NB    |         |
| Notched, -20°C          |                   | 60    |         |
| Hardness, Shore D       | -                 | 80    | ISO 868 |

MFR is measured from granulates

Test specimen: injection moulded rod; Thickness: 10 mm, width: 4 mm

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This product is REACH and RoHS compliant

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## Processing instructions

|                      | Unit | Processing range |          |
|----------------------|------|------------------|----------|
| Injection moulding   |      |                  |          |
| Material temperature | °C   | 220              | - 280    |
| Mould temperature    | °C   | 60               | - 80     |
| Injection pressure   | Bar  | 600              | - 800    |
| Injection speed      |      |                  | moderate |

## Notes

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

Processing conditions as with filled PA6. 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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