

## PRE-ELEC<sup>®</sup> PP 1370

---

0511

**PRE-ELEC<sup>®</sup> PP 1370 is a conductive thermoplastic compound based on polypropylene. Conductivity is achieved by using special conductive carbon black. In addition to a low electrical resistivity PRE-ELEC<sup>®</sup> PP 1370 has an excellent balance of mechanical properties and is easy to injection mould.**

**Typical applications include injection moulded crates, boxes and tote bins for electronic components and other static sensitive devices (SSD).**

### **Processing**

---

PRE-ELEC<sup>®</sup> PP 1370 compound can be processed in the injection moulding machines using normal processing conditions as with polypropylene:

#### **Injection moulding:**

|                      |                                  |
|----------------------|----------------------------------|
| Material temperature | 200 - 260°C (390 - 500°F)        |
| Mould temperature    | 60 - 80°C (140 - 180°F)          |
| Injection pressure   | 600 - 800 bar (8700 - 11600 psi) |
| Injection speed      | moderate                         |

These temperatures can be used for guidance purposes. They will also depend on the equipment used. The instructions of the equipment manufacturer should be followed.

Pre-drying is recommended e.g. 2 - 4 hours at 60 - 80°C (140 – 175°F).

### **Packaging and Storage**

---

PRE-ELEC<sup>®</sup> PP 1370 is supplied in granule form, packed in 20 kg polyethylene valve bags (1000 kg on one-way pallet) or in 1100 kg octabin.

The product can be stored one year in its original package. Packages should be stored indoors.

**PRE-ELEC® PP 1370**

| PHYSICAL PROPERTIES                     |         | ISO       | Unit              | ASTM    | Unit                            |
|---|---------|-----------|-------------------|---------|---------------------------------|
| Specific gravity                        |         |           | g/cm <sup>3</sup> |         | <b>0.98</b>                     |
| Density                                 |         |           |                   |         | lb/in <sup>3</sup> <b>0.035</b> |
| Melt Flow Index                         |         | 1133      |                   | D-1238  |                                 |
| 230°C / 2.16 kg                         |         |           | g/10min           |         | <b>2</b>                        |
| 230°C / 5.0 kg                          |         |           | g/10min           |         | <b>12</b>                       |
| Tensile strength                        |         | 527       | MPa               | D-638   | psi <b>2600</b>                 |
| Yield strength                          |         | 527       | MPa               | D-638   | psi <b>3800</b>                 |
| Elongation at break                     |         | 527       | %                 | D-638   | <b>30</b>                       |
| Elongation at yield                     |         | 527       | %                 | D-638   | <b>10</b>                       |
| Flexural modulus                        |         | 178       | MPa               | D-790   | 10 <sup>3</sup> psi <b>174</b>  |
| Impact strength, unnotched Izod         |         | 180       | kJ/m <sup>2</sup> | D-256   | ft-lb/in <sup>2</sup>           |
| 4.0 mm (0.156-in) thickness, 23°C/73°F  |         |           |                   |         | <b>NB</b>                       |
| 4.0 mm (0.156-in) thickness, -20°C/-4°F |         |           |                   |         | <b>NB</b>                       |
| Impact strength, notched Izod           |         | 180       | kJ/m <sup>2</sup> | D-256   | ft-lb/in <sup>2</sup>           |
| 4.0 mm (0.156-in) thickness, 23°C/73°F  |         |           |                   |         | <b>NB</b>                       |
| 4.0 mm (0.156-in) thickness, -20°C/-4°F |         |           |                   |         | <b>2</b>                        |
| Impact strength, unnotched Charpy       |         | 179       | kJ/m <sup>2</sup> | D-256   | ft-lb/in <sup>2</sup>           |
| 4.0 mm (0.156-in) thickness, 23°C/73°F  |         |           |                   |         | <b>NB</b>                       |
| 4.0 mm (0.156-in) thickness, -20°C/-4°F |         |           |                   |         | <b>29</b>                       |
| Impact strength, notched Charpy         |         | 179       | kJ/m <sup>2</sup> | D-256   | ft-lb/in <sup>2</sup>           |
| 4.0 mm (0.156-in) thickness, 23°C/73°F  |         |           |                   |         | <b>24</b>                       |
| 4.0 mm (0.156-in) thickness, -20°C/-4°F |         |           |                   |         | <b>10</b>                       |
| Vicat softening point                   |         | 306/      |                   | D-1525  |                                 |
| Rate A                                  |         | A50       | °C                |         | °F <b>300</b>                   |
| Rate B                                  |         | B50       | °C                |         | °F <b>-</b>                     |
| Deflection temperature                  |         | 75/       |                   | D-648   |                                 |
| 0.45 MPa (66 psi) - load                |         | Method Bf | °C                |         | °F <b>181</b>                   |
| 1.8 MPa (264 psi) - load                |         | Method Af | °C                |         | °F <b>129</b>                   |
| Volume resistivity                      |         | PRE021    | Ω cm              | PRE021  | Ωcm <b>&lt;10<sup>3</sup></b>   |
| Surface resistance                      |         | IEC       | Ω                 | ANSI/ES | Ω                               |
|   |         | 61340-2-3 |                   | D STM   | <b>&lt;10<sup>4</sup></b>       |
|   |         |           |                   | 11.11   |                                 |
| Mould shrinkage                         |         | 294-4     | %                 | D-955   | in/in <b>0.012-0.018</b>        |
| Hardness                                | Shore A | 868       |                   | D-2240  | <b>96</b>                       |
|   | Shore D |           |                   |         | <b>71</b>                       |

test specimen: 4.0 mm (0.156 in) thick, 10.0 mm (0.391 in) wide moulded rod

The information in this data sheet represents typical values obtained by us and should not be regarded as a specification.

We condition that the product will be inspected and qualified by the customer for his process to meet the specific requirements set by application, processing equipment and end product.

PRE-ELEC® is a registered trademark of Premix.