

## PE-UHMW (POLYETHYLENE) PE 1000 RECYCLED ANTISTATIC

### MATERIAL DATA SHEET

- Antistatic
- Good wear resistance
- Good sliding properties

| PROPERTIES   | Test methods    | Units                 | VALUES                     |
|--|-----------------|-----------------------|----------------------------|
| Color  | -               | -                     | Black                      |
| Density  | ISO 1183-1      | g/cm <sup>3</sup>     | 0.95                       |
| Water absorption at saturation in water of 23°C                      | ISO 62          | mg                    | <0.01                      |
| Flammability   | UL 94           |                       | HB                         |
| Molecular weight   | -               | 10 <sup>6</sup> g/mol | ~ 9                        |
| <b>Thermal Properties</b>  |                 |                       |                            |
| Melting temperature (DSC, 10°C/min)                                  | ISO 11357-1/-3  | °C                    | 135                        |
| Thermal conductivity at 23°C   | -               | W/(K.m)               | 0.40                       |
| Average coefficient of linear thermal expansion between 23 and 100°C | -               | m/(m.K)               | 150-230 x 10 <sup>-6</sup> |
| Thermal capacity   | ISO 52612       | kJ/(kg*K)             | 1,90                       |
| Max. allowable service temperature in air:                           |                 |                       |                            |
| - for short periods  | -               | °C                    | 130                        |
| - continuously: for min. 20,000 h                                    | -               | °C                    | 80                         |
| Vicat softening temperature  | ISO 306 Vicat B | °C                    | 79                         |
| Min. service temperature   | -               | °C                    | -250                       |
| <b>Mechanical Properties at 23°C</b>                                 |                 |                       |                            |
| Tension test   |                 |                       |                            |
| - tensile stress at yield  | ISO 527         | MPa                   | 20                         |
| - tensile modulus of elasticity                                      | ISO 527         | MPa                   | 700                        |
| Elongation at break  | ISO 527         | %                     | >200                       |
| Impact strength - notched  | ISO 179         | kJ/m <sup>2</sup>     | No break                   |
| Shore hardness D (15 s)  | ISO 2039-2      | -                     | 63                         |
| Wear resistance  | Sand-slurry     | -                     | 120                        |
| <b>Electrical Properties at 23 °C</b>                                |                 |                       |                            |
| Volume resistivity   | IEC 60093       | Ohm.cm                | < 10 <sup>9</sup>          |
| Surface resistivity  | IEC 60093       | Ohm                   | < 10 <sup>9</sup>          |

Note: 1 g/cm<sup>3</sup> = 1,000 kg/m<sup>3</sup> ; 1 MPa = 1 N/mm<sup>2</sup> ; 1 kV/mm = 1 MV/m. NA: not applicable

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