

## Technical Data Sheet

## Polystone® MPG black extruded

PE-UHMW / PE 1000

### Typical characteristics

- Long lifetime
- Good sliding properties with soft sliding partners
- Low moisture absorption
- Good wear resistance

### Typical industries

- Mechanical Engineering Industry
- Conveyor Technology & Automation

|                                         | Test method             | Unit                  | Guideline value   |
|-----------------------------------------|-------------------------|-----------------------|-------------------|
| <b>General properties</b>               |                         |                       |                   |
| Density                                 | DIN EN ISO 1183-1       | g / cm <sup>3</sup>   | >0,96             |
| Water absorption                        | DIN EN ISO 62           | %                     | <0,01             |
| Flammability (Thickness 3 mm / 6 mm)    | UL 94                   |                       | HB                |
| Molecular weight                        | -                       | 10 <sup>6</sup> g/mol | ~ 9               |
| <b>Mechanical properties</b>            |                         |                       |                   |
| Yield stress                            | DIN EN ISO 527          | MPa                   | >20               |
| Elongation at break                     | DIN EN ISO 527          | %                     | >50               |
| Tensile modulus of elasticity           | DIN EN ISO 527          | MPa                   | >700              |
| Notched impact strength                 | DIN EN ISO 11542-2      | kJ / m <sup>2</sup>   | >100              |
| Shore hardness                          | DIN EN ISO 868          | scale D               | >65               |
| <b>Thermal properties</b>               |                         |                       |                   |
| Melting temperature                     | ISO 11357-3             | °C                    | 135               |
| Thermal conductivity                    | DIN 52612-1             | W / (m * K)           | 0,40              |
| Thermal capacity                        | DIN 52612               | kJ / (kg * K)         | 1,90              |
| Coefficient of linear thermal expansion | DIN 53752               | 10 <sup>-6</sup> / K  | 150 ... 230       |
| Service temperature, long term          | Average                 | °C                    | -250 ... 80       |
| Service temperature, short term (max.)  | Average                 | °C                    | 130 ... 135       |
| Vicat softening temperature             | DIN EN ISO 306, Vicat B | °C                    | 79                |
| <b>Electrical properties</b>            |                         |                       |                   |
| Volume resistivity                      | DIN EN 62631-3-1        | Ω * cm                | >10 <sup>14</sup> |



|                     | Test method      | Unit     | Guideline value |
|---------------------|------------------|----------|-----------------|
| Surface resistivity | DIN EN 62631-3-2 | $\Omega$ | $>10^{14}$      |
| Dielectric strength | IEC 60243        | kV / mm  | $>40$           |

