

### Technical Data Sheet

## Polystone<sup>®</sup> M polyblue pressed

PE-UHMW / PE 1000

#### Typical characteristics

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

#### Typical industries

- Mechanical Engineering Industry

|   | 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                    | 130 ... 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             |
| Vicat softening temperature             | DIN EN ISO 306, Vicat B | °C                    | 79              |
| <b>Electrical properties</b>            |                         |                       |                 |

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|                     | Test method      | Unit                     | Guideline value |
|---------------------|------------------|--------------------------|-----------------|
| Volume resistivity  | DIN EN 62631-3-1 | $\Omega \cdot \text{cm}$ | $>10^{14}$      |
| Surface resistivity | DIN EN 62631-3-2 | $\Omega$                 | $>10^{14}$      |
| Dielectric strength | IEC 60243        | kV / mm                  | $>40$           |

The data stated above are average values ascertained by statistical tests on a regular basis. They are in accordance with DIN EN 15860. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.



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