

## Technical Data Sheet

# Matrox<sup>®</sup> SI 12 black

PE-UHMW / PE 1000

### Typical characteristics

- Low coefficient of friction
- Good wear properties
- Good impact strength

### Typical industries

- Bulk Material Handling

|   | Test method             | Unit                  | Guideline value |
|---|-------------------------|-----------------------|-----------------|
| <b>General properties</b>               |                         |                       |                 |
| Density                                 | DIN EN ISO 1183-1       | g / cm <sup>3</sup>   | >0,94           |
| 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 | ≥4              |
| <b>Mechanical properties</b>            |                         |                       |                 |
| Yield stress                            | DIN EN ISO 527          | MPa                   | >19             |
| 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>   | >70             |
| Shore hardness                          | DIN EN ISO 868          | scale D               | >63             |
| Wear resistance                         | Sand-slurry             |                       | 125             |
| Sand Slurry                             | 1018 Steel=10           |                       | ~ 120           |
| <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                    | -100 ... 80     |
| Service temperature, short term (max.)  | Average                 | °C                    | 130             |
| Vicat softening temperature             | DIN EN ISO 306, Vicat B | °C                    | 79              |
| <b>Electrical properties</b>            |                         |                       |                 |
| Dielectric constant                     | IEC 60250               |                       | 2,3             |

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Page 1 / 2 (Dates in DD/MM/YYYY)



|  | Test method | Unit    | Guideline value |
|--|-------------|---------|-----------------|
| Dielectric dissipation factor ( $10^6$ Hz) | IEC 60250   |         | 0,0004          |
| Comparative tracking index                 | IEC 60112   |         | 600             |
| 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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Page 2 / 2 (Dates in DD/MM/YYYY)

