

**Multilene® PE-M**

A very hardwearing polyethylene, tough and impact resistant, even at low temperatures. The material has limited compressive strength (creep phenomena) and a high coefficient of expansion. The anti-adhesion properties are excellent as well as the chemical resistance. This material is ideally suited for cryogenic applications.

| General properties                         | Test method | Value             | Unit                      |
|--------------------------------------------|-------------|-------------------|---------------------------|
| ISO code:                                  | ISO 1183    |                   |                           |
| Density:                                   | ISO 1183-1  | 0,93              | g/cm3                     |
| Water absorption in Air (23°C / 50% RH)    | ISO 62      | <0,01             | %                         |
| Water absorption in Air (23°C / 100% RH)   | ISO 62      | <0,01             | %                         |
| Resistance to hot water                    | n/a         | +                 |                           |
| Weather resistance                         | n/a         | -                 |                           |
| <b>Mechanical properties</b>               |             |                   |                           |
| Elongation at break:                       | ISO 527     | >200              | %                         |
| Ball indentation hardness                  | ISO 2039    | 30                | MPa                       |
| Tensile modules of elasticity              | ISO 527     | 680               | MPa                       |
| Charpy impact strength - notched           | ISO 179     | No Break          | kJ/m2                     |
| Charpy impact strength - unnotched         | ISO 179     | No Break          | kJ/m2                     |
| Compressive stress at 1%                   | n/a         | 6                 | MPa                       |
| Coefficient of friction                    | ASTM D 1894 | 0,1-0,2           |                           |
| <b>Thermal properties</b>                  |             |                   |                           |
| Melting temperature                        | n/a         | 135               | °C                        |
| Max. allowable service temp (short period) | n/a         | 120               | °C                        |
| Max. allowable service temp (long period)  | n/a         | 80                | °C                        |
| Min. service temperature                   | n/a         | -250              | °C                        |
| Coefficient of linear expansion            | n/a         | 180               | x10 <sup>-6</sup> m/(m*K) |
| Flammability                               | UL94        | HB                |                           |
| <b>Electrical properties</b>               |             |                   |                           |
| Dielectric dissipation (at 1MHz)           | ISO 60250   | 2,3               | Ω                         |
| Electric strength                          | ISO 60243   | 44                | kV/mm                     |
| Volume resistivity                         | ISO 60093   | >10 <sup>14</sup> | Ω.cm                      |

Date of issue: 4 May 2018

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