

# POLYSTONE® M black EL

Ultra High Molecular Weight Polyethylene

Röchling Engineering Plastics SE & Co. KG

## Message:

Product characteristics

Excellent electrical conductivity

High abrasion and wear resistance

Typical field of application

Mechanical engineering

Electrical and electronic industries

Bearing and packing industry

| General Information                          |                                    |                   |             |
|--|------------------------------------|-------------------|-------------|
| Features                                     | Conductivity                       |                   |             |
|  | Good wear resistance               |                   |             |
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| Uses   | Electrical/Electronic Applications |                   |             |
|  | Engineering application            |                   |             |
| Appearance                                   | Black                              |                   |             |
| Physical                                     | Nominal Value                      | Unit              | Test Method |
| Density                                      | 0.970                              | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption (Equilibrium, 23°C, 50% RH) | < 0.050                            | %                 | ISO 62      |
| Hardness                                     | Nominal Value                      | Unit              | Test Method |
| Durometer Hardness (Shore D)                 | 63                                 |                   | ISO 868     |
| Mechanical                                   | Nominal Value                      | Unit              | Test Method |
| Tensile Modulus                              | 700                                | MPa               | ISO 527-2   |
| Tensile Stress (Yield)                       | 20.0                               | MPa               | ISO 527-2   |
| Tensile Strain (Break)                       | > 200                              | %                 | ISO 527-2   |
| Impact                                       | Nominal Value                      | Unit              | Test Method |
| Charpy Notched Impact Strength               | No Break                           |                   | ISO 179     |
| Thermal                                      | Nominal Value                      | Unit              | Test Method |
| Continuous Use Temperature <sup>1</sup>      | < 130                              | °C                |             |
| Melting Temperature                          | 135                                | °C                | ISO 11357-3 |
| CLTE - Flow                                  | 1.5E-4 - 2.3E-4                    | cm/cm/°C          | DIN 53752   |
| Specific Heat                                | 1900                               | J/kg/°C           | DIN 52612   |
| Thermal Conductivity                         | 0.40                               | W/m/K             | DIN 52612   |
| Heat Deflection Temperature - Vicat B        | 79                                 | °C                | ISO 306     |
| Electrical                                   | Nominal Value                      | Unit              | Test Method |
| Surface Resistivity                          | < 1.0E+4                           | ohms              | IEC 60093   |

|   |               |         |             |
|---|---------------|---------|-------------|
| Volume Resistivity                            | < 1.0E+3      | ohms·cm | IEC 60093   |
| Flammability                                  | Nominal Value | Unit    | Test Method |
| Flame Rating                                  |               |         | UL 94       |
| 3.00 mm                                       | HB            |         | UL 94       |
| 6.00 mm                                       | HB            |         | UL 94       |
| Additional Information                        |               |         |             |
| Service Temperature (Long Term): -250 to 80°C |               |         |             |
| NOTE  |               |         |             |
| 1.  | Short Term    |         |             |

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