

# POLYSTONE® Marine-Tec

Thermoplastic

Röchling Engineering Plastics SE & Co. KG

## Message:

Product characteristics

UV-stabilized and colorfast

Seawater resistant

Crack-resistant

Typical field of application

Toy and leisure equipment

| General Information                          |                            |                   |             |
|----------------------------------------------|----------------------------|-------------------|-------------|
| Additive                                     | UV Stabilizer              |                   |             |
| Features                                     | Good Crack Resistance      |                   |             |
|                                              | Good UV Resistance         |                   |             |
|                                              | Salt Water/Spray Resistant |                   |             |
| Uses                                         | Marine Applications        |                   |             |
|                                              | Sporting Goods             |                   |             |
|                                              | Toys                       |                   |             |
| Physical                                     | Nominal Value              | Unit              | Test Method |
| Density                                      | 0.950                      | g/cm <sup>3</sup> | ISO 1183    |
| Water Absorption (Equilibrium, 23°C, 50% RH) | < 0.010                    | %                 | ISO 62      |
| Hardness                                     | Nominal Value              | Unit              | Test Method |
| Shore Hardness (Shore D)                     | 63                         |                   | ISO 868     |
| Mechanical                                   | Nominal Value              | Unit              | Test Method |
| Tensile Modulus                              | 800                        | MPa               | ISO 527-2   |
| Tensile Stress (Yield)                       | 22.0                       | MPa               | ISO 527-2   |
| Tensile Strain (Break)                       | > 50                       | %                 | ISO 527-2   |
| Impact                                       | Nominal Value              | Unit              | Test Method |
| Charpy Notched Impact Strength               | 10                         | kJ/m <sup>2</sup> | ISO 179     |
| Thermal                                      | Nominal Value              | Unit              | Test Method |
| Continuous Use Temperature                   |                            |                   |             |
| -- 1                                         | -30.0 to 80.0              | °C                |             |
| -- 2                                         | < 100                      | °C                |             |
| Melting Temperature                          | 135                        | °C                | ISO 11357-3 |
| CLTE - Flow                                  | 1.5E-4 to 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        | 67                         | °C                | ISO 306     |

| Electrical                 | Nominal Value | Unit    | Test Method |
|----------------------------|---------------|---------|-------------|
| Surface Resistivity        | > 1.0E+14     | ohms    | IEC 60093   |
| Volume Resistivity         | > 1.0E+14     | ohms·cm | IEC 60093   |
| Electric Strength          | 45            | kV/mm   | IEC 60243-1 |
| Dielectric Constant        | 2.50          |         | IEC 60250   |
| Dissipation Factor (1 MHz) | 4.0E-4        |         | IEC 60250   |
| Comparative Tracking Index | 600           | V       | IEC 60112   |
| Flammability               | Nominal Value | Unit    | Test Method |
| Flame Rating               |               |         | UL 94       |
| 3.00 mm                    | HB            |         |             |
| 6.00 mm                    | HB            |         |             |
| NOTE                       |               |         |             |
| 1.                         | Long Term     |         |             |
| 2.                         | Short Term    |         |             |

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