



**Engineering
Plastics**

QUANDA

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Typical Properties Data Sheet

The Supplier of Engineering Plastics
Rods, Sheets, Tubes, Profiles and Machining Parts

Benlonate® PET Properties Data Sheet

① Raw material description

| | | | |
|------------------------|--|--------------------------|-----|
| Standard Grade: | Extrusion grade | Appearance color: | --- |
| Applications: | Processing materials, rod, sheet, board. Used in electronics packing, medical laboratory equipments, machining shield, commodity display. | | |
| Remarks: | Characters: excellent dimension stability and mechanical property, low creep, excellent electrical characteristics, excellent weather resistance, organic flux resistance, oil and weak acid, excellent gas and water resistance, self-extinguishment. | | |

② Raw material technical datasheet

| Property item | Test conditions | Testing method | Testing data | Unit |
|---------------------------------------|-----------------|----------------|--------------|-----------------------------------|
| I. Physical property | | | | |
| Density | 23°C | ASTM D792 | 1.38 | g/cm ³ |
| Shrinkage | --- | ASTM D955 | 1.8 | % |
| Absorption | --- | ASTM D570 | 0.26 | % |
| Flammability class | --- | UL94 | HB | Class |
| II. Mechanical property | | | | |
| Tensile strength | 23°C | ASTM D638 | 78 | MPa |
| Elongation at break | --- | ASTM D638 | 50 | % |
| Flexural strength | 23°C | ASTM D790 | 115 | MPa |
| Hardness-Rockwell | --- | ASTM D785 | 117 | R (Scale) |
| Hardness- shore D | --- | ASTM D2240 | 84 | D |
| Impact strength(notched) | 23°C | ASTM D256 | 4 | KJ/m ² |
| Coefficient of friction | --- | ASTM D1894 | 0.25 | --- |
| III. Thermal property | | | | |
| Thermal deformation temperature | 1.82MPa | ASTM D648 | 85 | °C |
| Max. working temperature(short time) | --- | UL746B | 170 | °C |
| Max. working temperature(long time) | --- | UL746B | 110 | °C |
| Brittle temperature | --- | ASTM D746 | -40 | --- |
| Thermal conductivity | 23°C | ASTM C177 | 0.22~0.327 | 10-4W/(m*K) |
| Coefficient linear thermal expansion | --- | ASTM D696 | 10 | 10 ⁻⁵ *K ⁻¹ |
| IV. Electrical property | | | | |
| Dielectric constant | --- | IEC 60250 | 2.98~3.16 | --- |
| Dielectric loss angle tangent | --- | IEC 60250 | 0.014 | 10 ⁹ Hz |
| Dielectric strength | --- | IEC 60243 | 30 | kV/mm |

| | | | | |
|-------------------------|------|-----------|-------------------|--------|
| Volume resistivity | 23°C | IEC 60093 | 10 ¹⁸ | Ω * cm |
| Surface resistivity | 23°C | IEC 60093 | >10 ¹⁴ | Ω |
| Electric arc resistance | --- | IEC 61621 | 63~190 | sec |

NOTE: 1 g/cm³ = 1,000 kg/m³, 1 Mpa = 1 N/mm², 1kV/mm = 1 MV/m

Statement:

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Quanda will not provide any legally binding guarantee of certain properties, or any suitability.