



**CUT TO SIZE  
plastics**

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## TECHNICAL DATA SHEET POLYPROPYLENE

| <b>I. Physical Properties</b>                    | <b>Norm</b> | <b>Unit i. e.</b>     | <b>PP</b> |
|--|-------------|-----------------------|-----------|
| 1. Specific gravity ( $\rho$ )                   | ISO 1183    | g/cm <sup>3</sup>     | 0,9       |
| 2. Water absorption                              | DIN 53495   | %                     | 0,01      |
| 3. Chemical resistance                           | DIN 53476   | –                     | –         |
| 4. Max. permissible service temperature          |             |                       |           |
| (no stronger mech. stress involved)              |             |                       |           |
| upper temperature limit                          | –           | °C                    | 100       |
| lower temperature limit                          | –           | °C                    | 5         |
|  |             |                       |           |
| <b>II. Mechanical Properties</b>                 |             |                       |           |
| 1. Tensile strength at yield ( $\sigma_s$ )      | ISO 527     | MPa                   | 33        |
| 2. Elongation at yield ( $\epsilon_s$ )          | ISO 527     | %                     | 14        |
| 3. Tensile strength at break ( $\sigma_R$ )      | ISO 527     | MPa                   | -         |
| 4. Elongation at break ( $\epsilon_R$ )          | ISO 527     | %                     | >50       |
| 5. Impact strength ( $a_n$ )                     | ISO 179     | kJ/m <sup>2</sup>     | o.B.      |
| 6. Notch impact strength ( $a_k$ )               | ISO 179     | kJ/m <sup>2</sup>     | 13        |
| 7. Ball indentation hardn.(Hk)/Rockwell          | ISO 2039-1  | MPa                   | 71        |
| 8. Flexural strength ( $\sigma_B$ 3,5%)          | ISO 178     | MPa                   | -         |
| 9. Modulus of elasticity ( $E_t$ )               | ISO 527     | MPa                   | 1450      |
|  |             |                       |           |
| <b>III. Thermal Properties</b>                   |             |                       |           |
| 1. Vicat softening temp. VST/B/50                | ISO 306     | °C                    | 154       |
| VST/A/50   |             | °C                    | -         |
| 2. Heat deflection temp. HDT/B                   | ISO 75      | °C                    | 103       |
| HDT/A  |             | °C                    | -         |
| 3. Coef. of linear therm. expansion ( $\alpha$ ) | DIN 53752   | K-1x 10 <sup>-4</sup> | 1,5       |
| 4. Thermal conductivity at 20 °C ( $\lambda$ )   | DIN 52612   | W/(m*K)               | 0,22      |
|  |             |                       |           |
|  |             |                       |           |



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| <b>IV. Electrical Properties</b>                 |            |                           |                |
|--|------------|---------------------------|----------------|
| 1. Volume resistivity ( $\rho_D$ )               | VDE 0303   | $\Omega \times \text{cm}$ | $\geq 10^{16}$ |
| 2. Surface resistivity ( $R_o$ )                 | VDE 0303   | $\Omega$                  | $\geq 10^{13}$ |
| 3. Dielectric constant at 1 MHz ( $\epsilon_r$ ) | DIN 53483  |                           | 2,3            |
| 4. Diel. loss factor at 1 MHz ( $\tan\delta$ )   | DIN 53483  |                           | -              |
| 5. Dielectric strength                           | VDE 0303   | kV/mm                     | -              |
| 6. Tracking resistance                           | DIN 53480  |                           | KB >600        |
| <b>V. Additional Data</b>                        |            |                           |                |
| 1. Bondability                                   |            |                           | o              |
| 2. Physiol. indifference                         | EEC 90/128 |                           | +              |
| according  | FDA        |                           | +              |
| 3. Friction coefficient                          | DIN 53375  |                           | 0,3            |
| 4. Flammability                                  | UL 94      |                           | HB             |
| 5. UV stabilisation                              |            |                           | o              |
| <b>VI. Chemical Properties</b>                   |            |                           |                |
| 1. Acid resistance                               |            |                           | +              |
| 2. Hydrolysis resistance (delute)                |            |                           | +              |
| 3. Hydrocarbonat resistance                      |            |                           | +              |
| 4. CKW resistance                                |            |                           | o              |
| 5. Aromatic resistance                           |            |                           | -              |
| 6. Ketone resistance                             |            |                           | +              |
| 7. Resistance against hot water                  |            |                           | +              |

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For the most recent technical data and free application advice, please call Cut To Size Plastics on: (02) 9681 0400.