Physical properties (indicative values *)

**Properties**

- **Density**
  - ISO 1183-1 g/cm³: 1.2

- **Water absorption:**
  - ISO 62, %: 0.18
  - ISO 62, %: 0.40

**Thermal Properties (2)**

- **Melting temperature (DSC, 10 °C/min)**
  - ISO 11357-1/-2 °C: 150

- **Thermal conductivity at 23 °C**
  - W/(Km): 0.21

- **Coefficient of linear thermal expansion:**
  - - average value between 23 and 60 °C
  - m/(m.K): 65 x 10⁻⁶
  - - average value between 23 and 100 °C
  - m/(m.K): 65 x 10⁻⁶

- **Temperature of deflection under load - tensile modulus of elasticity (10) ISO 527-1/-2 MPa:** 2400

- **Glass transition temperature (DSC, 20 °C/min) - (3) ISO 11357-1/-2 °C:** 150

**Mechanical Properties at 23 °C (7)**

- **Tension test (8):**
  - - tensile strength (9) ISO 527-1/-2 MPa: 74
  - - elongation at yield (9) ISO 527-1/-2 %: 6
  - - elongation at break (9) ISO 527-1/-2 %: > 50
  - - tensile modulus of elasticity (10) ISO 527-1/-2 MPa: 2400

- **Compression test (11):**
  - - compressive stress at 1/2/5 % nominal strain (10) ISO 604 MPa: 21 / 40 / 80

- **Flexural test (12):**
  - - flexural strength ISO 178 MPa: 103
  - - flexural modulus of elasticity ISO 178 MPa: 2175

- **Chassy impact strength – unnotched (13) ISO 179-1/eA kJ/m²:** no break

- **Chassy impact strength – notched ISO 179-1/eA kJ/m²:** 3

- **Rockwell Hardness (14) ISO 2039-2:** 75

- **Dynamic Coefficient of Friction (1) ISO 7148-2 (15):** 0.5 - 0.6

- **Wear rate ISO 7148-2 (15) µm/km:** 60

**Electrical Properties at 23 °C**

- **Dielectric strength (16):**
  - EIC 60243-1 kV/mm: 28

- **Volume resistivity EIC 60093 Ohm.cm:** >10E14

- **Surface resistivity ANSI/ESD STM 11.11 Ohm/sq:** >10E13

- **Relative permittivity ε_r:**
  - - at 1 MHz ISO 60250: 3.00

- **Dielectric dissipation factor tan δ:**
  - - at 1 MHz ISO 60250: 0.008

Non-UV-stabilised polycarbonate stock shapes under the trade name PC 1000. It is a natural, “non-optical” industrial quality (clear, translucent).

**Legend:**

1. According to method 1 of ISO 62 and done on discs Ø 50 mm x 3 mm.
2. The figures given for these properties are for the most part derived from raw material supplier data and other publications.
3. Values for this property are only given here for amorphous materials and for materials that do not show a melting temperature (PBI, PAI, PI).
4. Values are given here is based on the thermal-oxidative degradation which takes place and causes a reduction in properties. Note, however, that the maximum allowable service temperature depends in many cases essentially on the duration and the magnitude of the mechanical stresses to which the material is subjected.
5. Values are given here is based on unfavourable impact conditions and may consequently not be considered as the absolute practical limit.
6. These estimated rankings, derived from raw material supplier data and other publications, are not intended to reflect hazards presented by the material until actual fire conditions. There is no UL File Number available for these stock shapes.
7. Most of the figures given for these mechanical properties of the materials are average values of tests run on dry test specimens machined either out of plate 15-20 mm thick or rod diameter 40-50mm, the test specimens were taken from the stock shape with their length in longitudinal direction (parallel to the extrusion direction).
8. Test specimens: Type 1 B
9. Test speed: either 5 or 50 mm/min (chosen acc to ISO 10350-1) as a function of the ductile behaviour of the material (tough or brittle).
10. Test speed: 1 mm/min.
11. Test specimens: cylinders Ø 8 mm x 16 mm.
12. Test specimens: bars 4 mm (thickness) x 10 mm x 80 mm; test speed: 2 mm/min; span: 64 mm.
13. Pendulum used: 4 J.
14. Measured on 10 mm thick test specimens.
15. Test procedure similar to Test Method A: “Pin-on-disk” as described in ISO 7148-5, Load 3MPa, sliding velocity= 0.35 m/s, mating plate steel Ra= 0.7-0.9 µm, tested at 23°C, 50%RH.
16. Electrode configuration: Ø 25 mm / Ø 75 mm coaxial cylinders - in transformer oil according to IEC 60296-1; 1 mm thick test specimens.

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