

Description

Poliamida 6.10 (Hexametilendiamina y diácido de sebasico)

Identifications

| | | | | | | |
|-------------------------------|----------|---|---|---|---|---|
| Resin identification ISO 1043 | PA6.10 | - | - | - | - | - |
| Part Marking code ISO 11469 | >PA6.10< | - | - | - | - | - |

Physical Properties

| | VALUES | Unit | ISO | DIN | ASTM D | JIS K |
|---------------------------------|-----------|---------------------|-------|-------|--------|--------|
| Density | 1.08 | gr/cm ³ | 1183 | 53479 | 792 | 7112 |
| Water Absorption (24 h / 23° C) | 0.4 - 0.6 | % | 62 | 53495 | 570 | 7209 |
| Water Absorption (equilibrium) | 3.3 | % | 62 | 53495 | 570 | 7209 |
| Abrasion Resistance | - | mm ³ | 4649 | 53516 | 5963 | 6369 |
| Melt flow rate (5 Kg/275°C) | 100 - 130 | gr/10' | 1133 | 53735 | 1238 | 7210 |
| Viscosity | 130 - 190 | cm ³ /gr | 4649 | 53728 | 7945 | 7367 |
| Mold Shrinkage (3,2mm) | 1 - 1.3 | % | 294-4 | 16901 | 955 | 7152-4 |

Mechanical Properties

| | VALUES | ISO | ISO | DIN | ASTM D | JIS K |
|-----------------------------------|-------------|-------------------|-----|-------|--------|-------|
| Tensile Strength Modulus | | | | | | |
| -at 100% | - | MPa | 527 | 53504 | 412 | 6251 |
| -at 300% | - | MPa | 527 | 53504 | 412 | 6251 |
| Tensile Strength Modulus | 50 - 65 | MPa | 178 | 53455 | 638 | 7162 |
| Elongation at break | 150 - 300 | % | 178 | 53455 | 638 | 7162 |
| Flexural Modulus | 1000 - 2100 | MPa | 178 | 178 | 790 | 7171 |
| Impact strength, Izod notched | 7 - 13 | kJ/m ² | 180 | - | 256 | 7110 |
| Impact strength, Izod unnotched | NB | kJ/m ² | 180 | - | 256 | 7110 |
| Impact strength, Charpy notched | 8 - 15 | kJ/m ² | 179 | 53453 | - | 7111 |
| Impact strength, Charpy unnotched | NB | kJ/m ² | 179 | 53453 | - | 7111 |
| Compression set 24h/70°C | - | % | 815 | 53517 | 395 | 6301 |
| Tear Strength | - | N/mm ³ | 34 | 53515 | 470 | 6252 |
| Hardness Shore D , 3 sec. | 60 - 85 | Point | 868 | 53505 | 2240 | 6253A |

Thermal Properties

| | VALUES | ISO | ISO | DIN | ASTM D | JIS K |
|--|----------------|------|-------|-------|--------|-------|
| VICAT Method A softening point 1Kg/120°C | - | °C | 306 | 53460 | 1525 | 7206 |
| H.D.T. Method B (0,4552 MPa) | 160 - 175 | °C | 75 | 53461 | 648 | 7191 |
| H.D.T. Method B (1.82 MPa) | 80 - 85 | °C | 75 | 53461 | 648 | 7191 |
| Max service temperature, long time | 80 - 110 | °C | UL746 | - | - | - |
| Max service temperature, short time | 140 - 180 | °C | UL746 | - | - | - |
| Melting point Tm | 221 - 225 | °C | 3146 | 11357 | 2217 | 7365 |
| Glass Transition Tg | 50 | °C | 3146 | 11357 | E1356 | 7095 |
| Thermal conductivity λ | 6 - 10 x 10e-5 | 1/°C | 8302 | 12939 | C177 | - |

Flammability Properties

| | | | | | | |
|--------------------------|---------|------|--------|-------|------|------|
| Oxygen Index | 23 - 27 | % | 4589-2 | 22117 | 2863 | - |
| Fire resistance (1,6 mm) | V2 | UL94 | UL94 | UL94 | UL94 | UL94 |

Injection conditions

| | |
|-----------------------------|---------|
| Drying Temperature (°C) | 80 |
| Drying Time (hrs) | 4 |
| Cylinder Temperature Rear | 185-219 |
| Cylinder Temperature Middle | 185-220 |
| Cylinder Temperature Front | 185-221 |
| Mold Temperature Fix | 20-30 |
| Mold Temperature Mobil | 20-30 |
| Injections speed | |

