

■ Features

TB120CR is general purpose and fast crystallity PA6 for injection molding.

■ Drying

Product is dried and packed with a moisture content of $\leq 0.16\%$. Should the Packaging become damaged or be left open too long, then the material must be Dried. A too high moisture content can lead to a reduction of optical and Mechanical properties.

■ Molding Guideline

| | | Unit | Setting |
|--------------------|--------------------------|------|-----------|
| Drying Temp. | | °C | 80 ~ 100 |
| Drying Time | | hr | 4 ~ 5 |
| Cylinder Temp. | Rear | °C | 225 ~ 245 |
| | Middle | °C | 230 ~ 260 |
| | Front | °C | 240 ~ 270 |
| Nozzle Temp. | | °C | 240 ~ 270 |
| Resin Temp. | | °C | 240 ~ 270 |
| Mold Temp. | | °C | 60 ~ 80 |
| Injection Speed | | % | 20 ~ 50 |
| Injection Pressure | 1 st Pressure | % | 30 ~ 60 |
| | 2 nd Pressure | % | 30 ~ 60 |
| | Back Pressure | % | 0 ~ 20 |

■ Handling and safety

Detailed information can be obtained from the “Material Safety Data Sheet”(MSDS)

Which can be requested with every material order.

Mechanical Properties

| | Test condition | Test Method | Unit | TB120CR |
|---------------------------|----------------|-------------|---------------------|---------|
| Tensile Strength at Break | 50mm/min | ASTM D638 | kgf/cm ² | 770 |
| Elongation at Break | 50mm/min | ASTM D638 | % | 60 |
| Flexural Strength | 3mm/min | ASTM D790 | kgf/cm ² | 1,100 |
| Flexural Modulus | 3mm/min | ASTM D790 | kgf/cm ² | 27,000 |
| Notch Izod Impact | 23°C(1/8") | ASTM D256 | kgf-cm/cm | 4.5 |
| Strength | -30°C(1/8") | ASTM D256 | kgf-cm/cm | - |
| Rockwell Hardness | R-Scale | ASTM D785 | - | - |

Thermal Properties

| | | | | |
|-----------------------|--------------------------|------------|----|-----|
| Heat Deflection Temp. | 4.6 kgf/cm ² | ASTM D648 | °C | 175 |
| Heat Deflection Temp. | 18.6 kgf/cm ² | ASTM D648 | °C | 85 |
| Melting Point | DSC | ASTM D3418 | °C | 220 |
| Flammability | | UL94 | - | HB |

Electrical Properties

| | | | | |
|---|--|-----------|--------|---|
| Volume Resistance | | ASTM D257 | Ohm-cm | - |
| Dielectric Constant(10 ⁶)Hz | | ASTM D150 | - | - |
| Dielectric Strength | | ASTM D149 | KV/mm | - |
| Arc Resistance | | ASTM D495 | Sec | - |

Physical Properties

| | | | | |
|------------------|------------|------------|---------|------|
| Specific Gravity | | ASTM D792 | - | 1.14 |
| Water Absorption | 23°C, 24hr | ASTM D570 | % | 1.7 |
| Melt Flow Index | | ASTM D1238 | g/10min | - |
| Shrinkage | | ASTM D955 | % | 1.4 |

Test condition : Dry as Molded

These values are for these specific compositions only. Addition of any kind may alter some or all of these properties. The data listed here fall within the normal range of product properties but they should not be used to establish specification limits nor used alone as the basis of design.

For further information on products, please contact customer service of MANDO Advanced Materials.