

CELANEX® 4022

fully opaque white PBT grade for light impermeable applications
 Celanex 4022 is a white PBT resin typically used for applications requiring very opaque parts.

Product information

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|-------------------|----------|-----------|
| Part Marking Code | PBT-MD16 | ISO 11469 |
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Rheological properties

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|------------------------------------|-------------|-----------------|
| Melt mass-flow rate | 19 g/10min | ISO 1133 |
| Melt mass-flow rate, Temperature | 250 °C | |
| Melt mass-flow rate, Load | 2.16 kg | |
| Moulding shrinkage range, parallel | 1.8 - 2.0 % | ISO 294-4, 2577 |

Typical mechanical properties

| | | |
|--------------------------------------|-----------------------|--------------|
| Tensile Modulus | 3200 MPa | ISO 527-1/-2 |
| Stress at break, 5mm/min | 58 MPa | ISO 527-1/-2 |
| Strain at break, 5mm/min | 8 % | ISO 527-1/-2 |
| Flexural Strength | 86 MPa | ISO 178 |
| Charpy impact strength, 23°C | 33 kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 3.5 kJ/m ² | ISO 179/1eA |

Thermal properties

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|---|-------|-------------|
| Temp. of deflection under load, 1.8 MPa | 63 °C | ISO 75-1/-2 |
|---|-------|-------------|

Flammability

| | | |
|------------------|---------|-------|
| Thickness tested | 0.79 mm | UL 94 |
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Electrical properties

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|----------------------------|-----------|---------|
| Comparative tracking index | PLC 1 PLC | UL 746A |
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Other properties

| | | |
|---------|------------------------|----------|
| Density | 1460 kg/m ³ | ISO 1183 |
|---------|------------------------|----------|

Injection

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|------------------------|------------|
| Max. mould temperature | 65 - 93 °C |
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Characteristics

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| Additives | Release agent, Mineral Filler |
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Additional information

Injection molding

Rear Temperature 450-470(230-240) deg F (deg C)
 Center Temperature 460-480(235-250) deg F (deg C)
 Front Temperature 470-500(240-260) deg F (deg C)
 Nozzle Temperature 480-500(250-260) deg F (deg C)
 Melt Temperature 460-500(235-260) deg F (deg C)
 Mold Temperature 150-200(65-93) deg F (deg C)
 Back Pressure 0-50 psi
 Screw Speed Medium
 Injection Speed Fast

Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used.

Processing Texts

Injection molding

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Injection molding Preprocessing

To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-30°F (-34°C) at 250°F (121°C) for 4 hours.

Other Approvals

Other Approvals

| OEM | Specification |
|-------------|---------------|
| Continental | SN 57908-4 |

