

ISSUED: 06/02/2023

ISO 9001 CERTIFIED

**Recomyde B30 P3 G50** is a recycled polyamide 6 injection moulding grade, reinforced with 50% glass fibre and heat stabilized. White colour.

PROPERTIES	CONDITIONS	TEST METHOD	UNITS	VALUES
PHYSICAL PROPERTIES				
Density	23 °C	ISO 1183	g/cm³	1,56
Moisture absorption	23 °C / 50% r.h.	ISO 62	%	1,5
Water absorption	23 °C / saturation in water	ISO 62	%	4,5
Flammability	1,5 mm	UL-94		HB
PROCESSING CONDITIONS				
Melt temperature, injection moulding			°C	240-290
Mould temperature			°C	40-80
Moulding Shrinkage	longitudinal transversal		%	0,30-0,35 0,40 -0,45
MECHANICAL PROPERTIES				(dry/cond.)*
Tensile modulus	23 °C, 1 mm/min	ISO 527-1-2	MPa	14.000 / 10.000
Tensile strength	23 °C, 50 mm/min	ISO 527-1-2	MPa	170 / 120
Elongation at break	23 °C, 50 mm/min	ISO 527-1-2	%	2,0 / 4,0
Flexural modulus	23 °C, 2 mm/min	ISO 178	MPa	12.000 / 8.000
Flexural strength	23 °C, 2 mm/min	ISO 178	MPa	230 / 150
Charpy unnotched impact strength	23°C	ISO 179/1eU	kJ/m²	65 / 90
Charpy notched impact strength	23°C	ISO 179/1eA	kJ/m²	12 / 20
THERMAL PROPERTIES				
Melting temperature (DSC)	10°C/min	ISO 3146	°C	222
Heat Deflection Temperature (HDT)	1,8 MPa	ISO 75-1-2	°C	205
	0,45 MPa			215
Thermal coefficient of linear expansion	23-80°C long.	ISO 11359-1/-2	10 <sup>-4</sup> /K	0,15
	23-80°C transv.			0,40
ELECTRICAL PROPERTIES				(dry/cond.)*
Dielectric constant	1MHz	IEC 60250	-	3,5 / 6,5
Dissipation factor	1 MHz	IEC 60250	10 <sup>-4</sup>	200 / 2.000
Volume resistivity		IEC 60093	Ω.m	10 <sup>13</sup> / 10 <sup>10</sup>
Surface resistivity		IEC 60093	Ω	10 <sup>13</sup> / 10 <sup>10</sup>

\* dry = dry as moulded / cond.= conditioned according to ISO 1110

**CHARACTERISTICS**

**Recomyde B30 P3 G50** is distinguished by high mechanical strength, hardness, rigidity, UV and thermo stability, and resistance to hot lubricants and water. White colour.

**APPLICATIONS**

**Recomyde B30 P3 G50** is used in a wide range of applications where a combination of mechanical properties and thermal resistance is needed. Glass-fibre reinforced grades are suitable for housings, supports, industrial articles and electrical insulating parts.

**FORMAT AND STORAGE**

**Recomyde B30 P3 G50** is supplied in moisture-proof packaging. Typical formats are Big Bag, octavin, and 25kg bags. All containers are perfectly sealed. The product should be stored in a dry place and opened just before processing.

**PROCESSING GUIDELINES****Drying**

Material is supplied ready to process with low moisture content. When moisture absorption is prevented drying is not required. When drying is necessary, conditions are:

Drying temperature  $\leq 80$  °C

Drying time: 4-6 hours

**Injection moulding**

The recommended processing parameters for injection moulding are:

Melt temperature: 240-290°C

Mould temperature: 40-80 °C

Injection speed: medium to high

Back pressure: moderate

**Shrinkage**

The shrinkage of a moulded part is influenced by wall thickness, mould gating, and moulding conditions.

**Moisture**

A particular characteristic of reinforced polyamide 6 is its combination of moderate tensile and flexural strength with rigidity, good impact strength, and friction resistance. However, when a moulded part absorbs moisture, tensile and flexural strength decrease and toughness increases.

**NOTE**

All recommendations are based on knowledge and experience; The values have been established on standardized tests. The figures should be regarded as guide values and not as binding minimum values. As many factors may affect processing or applications, we recommend that customers make their own tests to determine the suitability of a product for its particular use.