

ISSUED: 06/02/2023

ISO 9001 CERTIFIED

Recomyde B30 P4 is an unreinforced Polyamide 6 for injection moulding. **Recomyde B30 P4** contains more than 30% recycled polymer from textile waste. This product complies with the requirements of the certification system ISCC Plus Circular. White colour.

PROPERTIES	CONDITIONS	TEST METHOD	UNITS	VALUES
PHYSICAL PROPERTIES				
Density	23 °C	ISO 1183	g/cm³	1,13
Moisture absorption	23 °C / 50% r.h.	ISO 62	%	3
Water absorption	23 °C / saturation in water	ISO 62	%	9,5
Flammability	1,5 mm	UL-94		V2
PROCESSING CONDITIONS				
Melt temperature, injection moulding			°C	230-270
Mould temperature			°C	40-90
Moulding Shrinkage	longitudinal transversal		%	0,9-1,2 1.0 -1,3
MECHANICAL PROPERTIES (dry/cond.)*				
Tensile modulus	23 °C, 1 mm/min	ISO 527-1-2	MPa	3.000 / 1.600
Tensile strength	23 °C, 50 mm/min	ISO 527-1-2	MPa	75 / 50
Elongation at break	23 °C, 50 mm/min	ISO 527-1-2	%	> 10 / >20
Flexural modulus	23 °C, 2 mm/min	ISO 178	MPa	2.300 / 1.200
Flexural strength	23 °C, 2 mm/min	ISO 178	MPa	105 / 65
Charpy unnotched impact strength	23°C	ISO 179/1eU	kJ/m²	150 / NB
Charpy notched impact strength	23°C	ISO 179/1eA	kJ/m²	4.0 / 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	65
	0,45 MPa			180
Thermal coefficient of linear expansion	23-80°C long. 23-80°C transv.	ISO 11359-1/-2	10 ⁻⁴ /K	0,7 1
ELECTRICAL PROPERTIES (dry/cond.)*				
Dielectric constant	1MHz	IEC 60250	-	3,5 / 7
Dissipation factor	1 MHz	IEC 60250	10 ⁻⁴	300 / 3.000
Volume resistivity		IEC 60093	Ω.m	10 ¹³ / 10 ¹⁰
Surface resistivity		IEC 60093	Ω	10 ¹³ / 10 ¹⁰

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

CHARACTERISTICS

Recomyde B30 P4 is a recycled polyamide 6 heat stabilized, lubricated and nucleated for fast cycle and technical injection moulding. Its main characteristics are easy flowing, easy mould filling and very fast cooling time whilst maintaining excellent polyamide 6 mechanical properties. White colour.

APPLICATIONS

Due to its easy flow characteristics and very fast cooling time, combined with its excellent mechanical and thermal properties make it suitable for high speed multi cavity injection moulding for parts such as components used in automotive, electrical, electronics, curtain systems, and also for large technical parts produced in single cavity moulds.

FORMAT AND STORAGE

Recomyde B30 P4 is supplied in moisture-proof packaging. Typical formats are Big Bags, Octavins, 25kg bags, and bulk silo trucks. All containers are perfectly sealed. The product should be stored in a dry place and opened just before processing.

PROCESSING GUIDELINES

Drying

Drying temperature $\leq 80^{\circ}\text{C}$

Drying time: 4-6 hours

Injection moulding

The recommended processing parameters for injection moulding are:

Melt temperature: $230\text{--}270^{\circ}\text{C}$

Mould temperature: $40\text{--}90^{\circ}\text{C}$

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.