NOPLA 104

Biodegradable thermoplastic material designed for injection moulding applications

PRODUCT DATA SHEET
Date: 07.2023

Product description	Thermoplastic material 100% of biological origin, produced from annually renewable plant resources, GMO free. Designed for injection moulding applications. It is fully biodegradable and compostable in natural conditions.
Processing conditions	The material is designed for injection moulding production. It has hygroscopic properties, which is why it is supplied in airtight packaging that should be unsealed immediately before use. It is recommended to pre-dry the product before processing. It is also recommended that the granules be protected from moisture at each stage of processing, as well as during storage in unsealed packages. Processing parameters: Supply zone temperature below 30°C Temperature of the plasticising zone within the range of 160-200°C Mould temperature below 30°C The material is not compatible with plastics, therefore the cleaning of the injection system is required in order to avoid microplastic contamination. Do not overheat the material to more than 200°C. It is advisable to prevent prolonged stagnation of the material in the cylinder, otherwise thermal degradation may occur, leading to production instability and deterioration of the properties of products.
Form/Colour	The product has the form of beige granulate. Colouring should only be carried out with the manufacturer's supplied colour concentrates.
Packaging	The granulate in airtight packaging should be stored in a dry and cool place with no direct sunlight access and all the external sources of heat. The packaging must be airtight until the material is used and resealed after use to avoid water contamination. If the granulate becomes moist it is advisable to dry it before use for at least 3 h at the temperature of 60°C.
Packaging	Barrier: 25 kg bag, 1000 kg big bag, 1000 kg octabin

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Typical properties	Unit	Nominal value*	Research method
Physical			
Density	g/cm^3	1,34	PN-EN ISO 1183-1
MFR (190°C, 2,16 kg)	g/10 min	21	PN-EN ISO 1133
MVR (190°C, 2,16 kg)	cm^3/10 min	17	
Mechanical			
Tensile strength	MPa	27	PN-EN ISO 527
Elongation at break	%	2	
Tensile modulus of elasticity	GPa	1.4	
Modulus of rupture	MPa	33	PN-EN ISO 178
Modulus of elasticity under bending	GPa	2.0	
Charpy notched impact strength	kJ/m^2	9	PN-EN ISO 179-1
Izod unnotched impact strength	kJ/m^2	7	PN-EN ISO 180
Thermal			
Vicat softening point, method A/10 N	°C	62	PN-EN ISO 306
HDT – heat deflection temperature, method B (0.45 MPa)	°C	54	PN-EN ISO 75-2

* Typical nominal values stated for information only, do not treat as the product specification.

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