Kareline® PLMS7525

Polylactic Acid

Plasthill Oy

Message:

Kareline® PLMS composites are injection mouldable natural fibre reinforced thermoplastic composites, which are biologically degradable, when subjected to the right conditions:
Excellent oxidation-, colour- and molecular weight stability in the melt
Compostable: The matrix polymer (PLA) used in the composite is certified according to DIN EN 13432:2000-12 and ASTM D 6400. Natural fibres used certified as biodegradable and compostable.
Polymer used is on renewable monomers
Fibres used are based on sustainable produced, renewable, environment certified (PEFC) forest resources from non-rainforest sources.
The matrix plastic of Kareline® PLMS composites is polylactic acid (PLA). The fibre used is ECF bleached long fibre Nordic soft wood pulp (cellulose). The fibre content of Kareline® PLMS composites is 10-50 weight% (for example Kareline® PLMS6040, Kareline® PLMS7030). Customer tailor made grades are also available.
PLMS is hydrolysed autocatalytically in humid environments at temperatures above 60°C. The subunit lactic acid is liberated to be used by micro-organisms as food. The speed of biodegradation depends on the thickness of the moulded article and on the ambient temperature.
The material can be regarded as CO2-neutral and renewable, because lactic acid used is made out of natural sugar resources, which are in turn made by photosynthesis out of CO2 in plants, just like the fibres used are from renewable forest resources.
Kareline® PLMS composites are suitable for e.g. compostable products, products used in cemeteries, disposables and packaging.

General Information	
Filler / Reinforcement	Wood fiber
Features	Low friction coefficient Comstable Updatable resources Sprayable Machinable Good color stability Good wear resistance Thermal insulation Biodegradable Low shrinkage Excellent appearance
Uses	Packaging Compost products
Agency Ratings	ASTM D 6400 DIN EN 13432
Appearance	Brown
Forms	Particle
Processing Method	Injection molding

Physical	Nominal Value	Unit	Test Method
Density	1.31	g/cm³	ISO 1183

Melt Mass-Flow Rate (MFR) (200°C/10.0 kg)	44	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (200°C/10.0 kg)	38.1	cm^3/10min	ISO 1133
Molding Shrinkage	0.40	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	0.70	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale, 23°C)	121		ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress	70.3	MPa	ISO 527-2
Tensile Strain (Break)	2.5	%	ISO 527-2
Flexural Modulus	5100	MPa	ISO 178
Flexural Stress	110	MPa	ISO 178
Flexural Strain at Flexural Strength	2.5	%	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	15	kJ/m^2	ISO 179
Thermal	**Nominal Value**	**Unit**	
Continuous Use Temperature	-25.0 - 85.0	°C	
Injection	**Nominal Value**	**Unit**	
Drying Temperature	75.0	°C	
Drying Time	8.0	hr	
Rear Temperature	180	°C	
Middle Temperature	185	°C	
Front Temperature	185	°C	
Nozzle Temperature	200	°C	
Processing (Melt) Temp	< 210	°C	
Mold Temperature	5.00 - 20.0	°C	
Injection Pressure	< 100	MPa	

Injection instructions

Feed Throat Temperature: <30°C

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China


WECHAT