

Kareline® PPMS5050

Polypropylene Homopolymer

Plasthill Oy

Message:

Kareline® PPMS composites are a family of injection mouldable natural fibre reinforced thermoplastic composites.

Kareline® PPMS EC gives exceptionally "natural/wild" appearance to moulded products (e.g. Kupilka, www.kupilka.fi). It can be coloured to "earth-colours".

Kareline® PPMS COW is a natural white material with "egg shell-like" surface pattern. It can be easily coloured.

When especially bright colours are needed, Kareline® PPMS CO is the right material.

The matrix plastic of all Kareline ® PPMS composites is polypropylene. Polypropylene is homopolymer (Kareline PPMS EC) or copolymer grade (Kareline PPMS COW and CO).

The fibre used is ECF bleached long fibre Nordic soft wood pulp (cellulose). The fibre content of Kareline® PPMS composites is 10-55 weight% (for example Kareline® PPMS 5050 EC, Kareline® PPMS7525 COW). Customer tailor made grades are also available.

Kareline® PPMS composites are suitable for a wide variety of applications e.g. furniture, decorations, garden furniture and tools, interior design, handles of tools, technical applications, household applications, different appliances, in sauna and bathrooms, applications where glass reinforced PP is used.

If needed, it is possible to have Kareline ® PPMS products with very beautiful and living surface structure and colours using Kareline ® PPMS5050 EC modified composite.

Kareline® PPMS composites have a lot of good properties:

High rigidity

Good thermal properties

Good mechanical properties

Good chemical resistance

Small shrinkages in injection moulding

Very small thermal expansion. Good dimensional stability

No sink marks in moulded parts, even in very thick walls

Pleasant feel and appearance of surface; if needed very beautiful living/natural surface is possible

It is not recommended to use Kareline® PPMS under the following conditions:

very low temperatures (under -25)

Together with strongly oxidizing chemicals

General Information	
Filler / Reinforcement	Wood Fiber
Features	Electrically Insulating
	Food Contact Acceptable
	Good Chemical Resistance
	Good Dimensional Stability
	Good UV Resistance
	Good Weather Resistance
	High Rigidity
	Homopolymer
	Low Shrinkage
	Low Toxicity
	Machinable
	Paintable
	Pleasing Surface Appearance
	Renewable Resource Content
	Thermally Insulating
	Ultrasonic Weldable

Uses	Appliances		
	Bathroom Accessories		
	Decorative Parts		
	Furniture		
	Handles		
	Household Goods		
	Lawn and Garden Equipment		
Appearance	Brown		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (200°C/10.0 kg)	4.70	cm³/10min	ISO 1133
Molding Shrinkage	0.40	%	
Water Absorption ¹ (Saturation, 23°C)	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2300	MPa	ISO 527-2
Tensile Stress (Yield)	57.0	MPa	ISO 527-2
Tensile Strain (Yield)	4.3	%	ISO 527-2
Flexural Modulus	4200	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	3.0	kJ/m²	ISO 179
Thermal	Nominal Value	Unit	
Continuous Use Temperature	-25.0 to 120	°C	
CLTE - Flow	4.7E-5	cm/cm/°C	
Flammability	Nominal Value		Test Method
Flame Rating	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	80.0 to 100	°C	
Drying Time	4.0 to 8.0	hr	
Rear Temperature	180	°C	
Middle Temperature	190	°C	
Front Temperature	195	°C	
Nozzle Temperature	200	°C	
Processing (Melt) Temp	< 210	°C	
Mold Temperature	20.0 to 40.0	°C	
Injection Pressure	< 100	MPa	
NOTE			
1.	72 hrs		

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