

Technical Specification



KCL Formi® Pro PPC

Material KCL Formi is cellulose fibre reinforced plastic composite with high renewable material content. It is specially designed for injection moulding applications. Principal ingredients are specially selected cellulose fibres and virgin polypropylene. Cellulose fibres significantly increase stiffness and strength of polypropylene.

Applications Environmentally sound KCL Formi composite can be used in injection moulding applications instead of polypropylene, filled polypropylene or several other plastics.

Environment KCL Formi is manufactured from renewable cellulose fibers which reduce usage of oil based plastics. Material is fully recyclable or can be burned for energy. All cellulose fibres are from sustainably managed forests.

Physical and mechanical properties	Property	Test method	PPC30	PPC40	PPC50
	Density, g/cm ³	ISO 1183	1.03	1.08	1.13
	Tensile strength, 50mm/min, N/mm ²	ISO 527-2	48	57	62
	Tensile modulus, 1mm/min, N/mm ²	ISO 527-2	2800	3700	5100
	Elongation at break, 50mm/min, %	ISO 527-2	7.5	5.3	3.4
	Charpy impact strength, notched +23 °C, kJ/m ²	ISO 179-2/1eA	6.9	7.3	7.5
	Charpy impact strength, unnotched +23 °C, kJ/m ²	ISO 179-2/1eU	38	39	40
	Cellulose content, weight %		30	40	50

Pretreatment KCL Formi contains cellulose fibres which may absorb moisture if the package is open. Close the package at all times when possible. KCL Formi composite should be dried for minimum of 3 hours at 115 °C (dehumidifying dryer preferred).

Injection moulding KCL Formi does not need special equipment for processing. Recommended processing parameters for typical injection moulding machine are:

Temperature profile from nozzle	195/190/185/180 °C
Injection pressure	<1200 bar
Mould temperature	+60 - +80
Injection speed	As high as possible

Safety Maximum recommended processing temperature is 200 °C. Overheating may cause risk for thermal degradation.

Storage KCL Formi granulates should be protected from UV-light and stored in closed packages in dry conditions at temperature below 50 °C. Air humidity can increase moisture content of the material and have negative effects on the end product properties.

All information provided is based on our knowledge and experience. It is intended solely as a guide for the safe handling, use, processing, transport, storage, disposal, and release of the material, and should not be considered a guarantee or quality certification. You must adhere to all applicable rules, regulations, and guidelines when using the material. You are fully responsible for any claims or liabilities arising from your handling, use, processing, transport, storage, disposal, and release of the material