

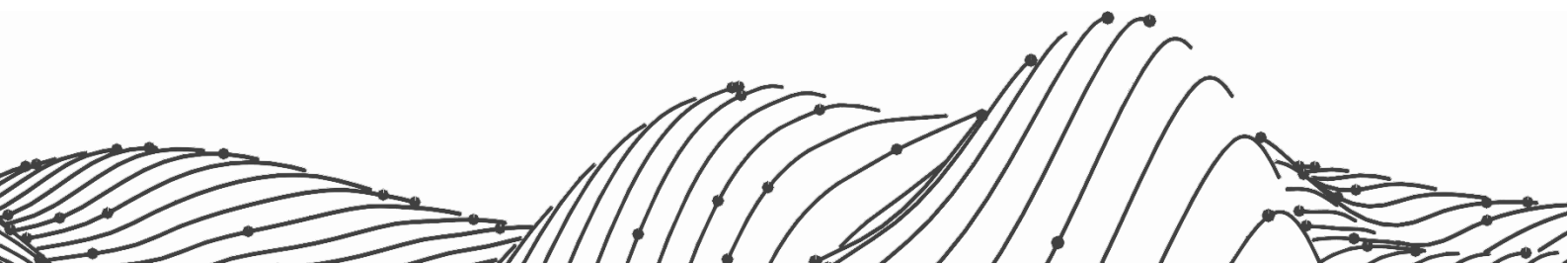


KREI MAXEM HF

KREI MAXEM HF is a revolutionary polymer based on polyesteramide that presents high mechanical, thermal and chemical resistance. It is the first material for 3D printing where its mechanical and thermal properties depend on the processing method, allowing different results to be obtained depending on the technique used. When processed with ventilation (semi-crystalline form), it results in semi-flexible parts with excellent surface finish, great dimensional stability, excellent chemical resistance, good impact resistance and a softening temperature of approximately 90°C. When processed without ventilation (crystalline form), it results in highly rigid parts with excellent surface finish, great dimensional stability, excellent chemical resistance, excellent abrasion resistance and a softening temperature of approximately 180°C. Available in different colors, it can be used in any printer that operates at temperatures between 250°C - 300°C and has a heated bed.

DIFFERENTIALS OF **KREI MAXEM HF**:

- High thermal resistance in crystalline form (approx. 180°C);
- High rigidity in crystalline form;
- High resistance to abrasion in crystalline form;
- High flexibility in semi-crystalline form;
- Good impact resistance in semi-crystalline form;
- Superior chemical resistance vs. ABS, ASA, PLA, PLA REVOLUTION HF, PLA REVOLUTION CARBON HF, PETG, CORE HF, PET, APEX CARBON HF and POLYAMIDE, enabling the use of solvents and facilitating the painting and finishing process;
- Resistance to ultraviolet rays, not suffering degradation if subjected to sunlight;
- Dimensionally stable in both forms;
- Low moisture absorption;
- It has no odor emitted during printing and does not emit toxic vapors during processing;
- Free of chlorine in its formulation;
- Accepts working at high printing speeds;
- Excellent adhesion between layers, allowing parts to be sanded, drilled and machined without peeling;
- Excellent adhesion to the printing table, not requiring the use of adhesives/glues;
- Presents excellent surface finish in both forms;
- May come into contact with food;
- Wide processing range: 250 - 300°C.



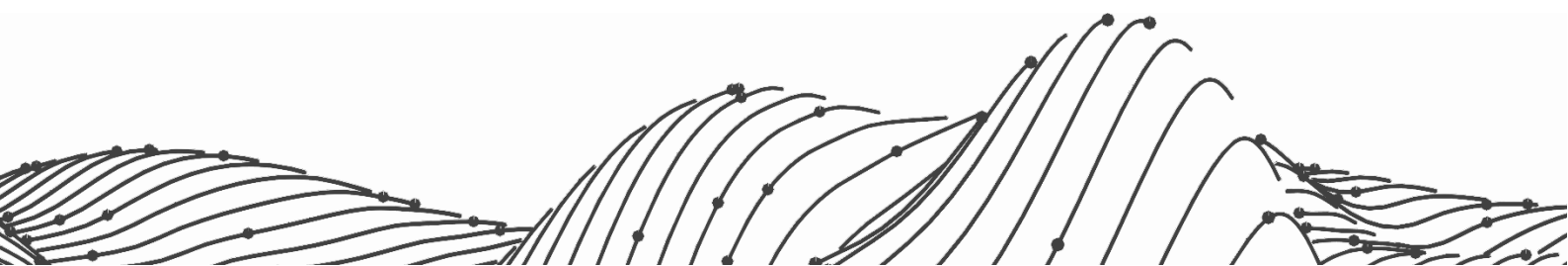
IDENTIFICATION	
Comercial name	KREI MAXEM HF
Chemical name	Polyesteramide
Aplication	FFF 3D printing
Diameter (mm)	1,75±0,05 / 2,85±0,05
Manufacturer	SPALC INDUSTRIAL

MECHANICAL PROPERTIES	KREI MAXEM HF (SEMI-CRYSTALLINE)
Specific gravity (g/cm ³)	≈ 1,3
Softening temperature (°C)	≈ 90
Tensile stress at yield (MPa)	≈ 46
Elongation at break (%)	≈ 50
IZOD impact resistance (entahado kJ/m ²)	≈ 23
Flexural Strength (MPa)	≈ 50
Hardness (shore D)	≈ 60

MECHANICAL PROPERTIES	KREI MAXEM HF (CRYSTALLINE)
Specific gravity (g/cm ³)	≈ 1,3
Softening temperature (°C)	≈ 180
Tensile stress at yield (MPa)	≈ 80
Elongation at break (%)	≈ 0
IZOD impact resistance (entahado kJ/m ²)	≈ 5
Flexural Strength (MPa)	≈ 100
Hardness (shore D)	≈ 120

PARAMETERS FOR FFF PRINTING WITH KREI AMXEM HF (SEMI-CRYSTALLINE)		
PARAMETER	STANDARD	RANGE
Nozzle temperature (°C)	265	250 a 300
Bed temperature (°C)	75	60 a 90
Print speed (mm/s)	150	40 a 600
Nozzle diameter (mm)	≥ 0,1	
Recommended layer height (mm)	≥ 0,05	
First layer print speed (mm/s)	60	40 a 80
First layer fan speed (%)	0	
Model fan speed (%)	60	30 a 100

PARAMETERS FOR FFF PRINTING WITH KREI MAXEM HF (CRYSTALLINE)		
PARAMETER	STANDARD	RANGE
Nozzle temperature (°C)	265	250 a 300
Bed temperature (°C)	75	60 a 90
Print speed (mm/s)	150	40 a 300
Nozzle diameter (mm)	≥ 0,1	
Recommended layer height (mm)	≥ 0,05	
First layer print speed (mm/s)	60	40 a 80
First layer fan speed (%)	0	
Model fan speed (%)	0	





- The aforementioned values may vary according to the analysis methodology used;
- The parameters described above may vary depending on the printer model to be used and slicing conditions;
- It is recommended to use a thermal insulator for the heating head (heat block).

Once opened, the filament can absorb moisture from the air. If this happens, it can be dried at 65°C for 4 hours to completely remove water molecules.

Due to its mechanical, thermal and chemical resistance, this filament can be used for any type of printing, including functional parts. This filament can be used to print waterproof and watertight parts.

