WINDFORM® LX 2.0

Class of material: Composite polyamide based material reinforced with glass fibers

Technology: Selective Laser Sintering

Windform® LX 2.0 has been improved from the already excellent performance of Windform® LX. These improvements can be noticed in the technical properties of the material, and from a sinterability standpoint.
Windform® LX 2.0 is a composite polyamide based material which is reinforced with a new generation glass fiber system. The properties of Windform® LX 2.0 make it particularly suited for functional applications, as well as finished complex parts.
Windform® LX 2.0 is a naturally black material which can be polished to a glossy finish, and is characterized by improved Ultimate Tensile Strength (UTS), electrically insulative properties (CTI Rating of 600), and increased stiffness.
Windform® LX 2.0 is perfect for creating functional prototypes or finished parts that require functionality, resistance to high temperatures, and a captivating matte black color.

Applications:

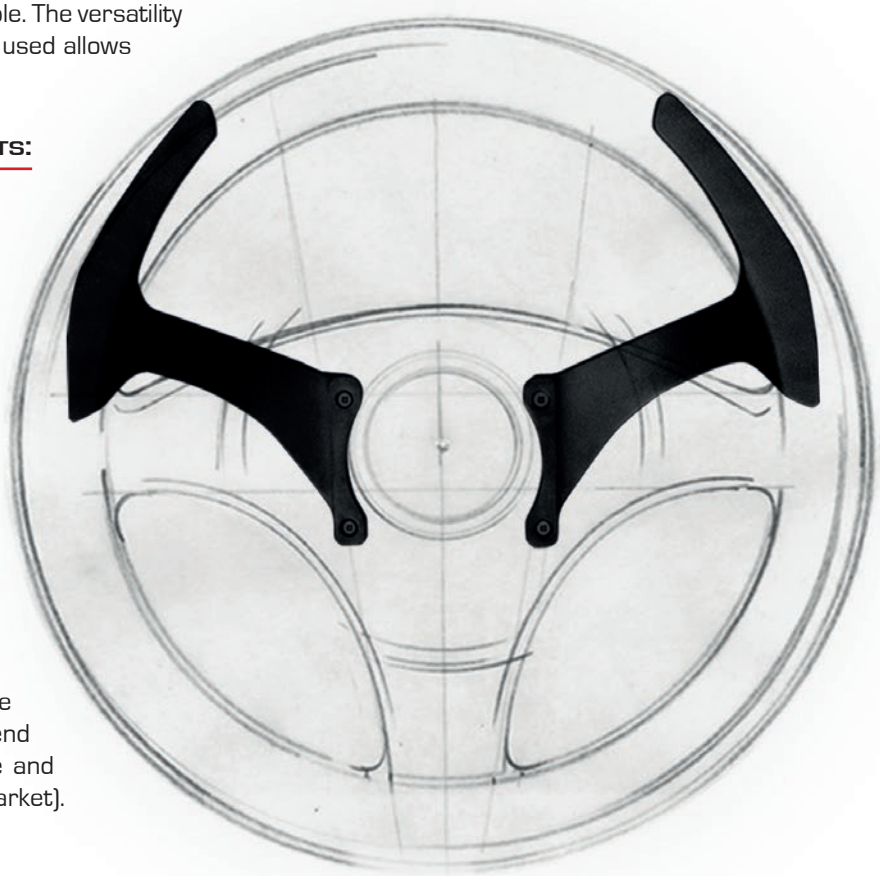
Covers, electronics enclosures, battery boxes, air intake systems, connectors, driver cockpit components (steering wheels, wheel-mounted paddle shifters, instrument clusters), cooling/ducted fans, UAV structural components, functional sports prototypes, design parts, stiff pieces for packaging and assembly line components, and other applications in the naval and aerospace industries.
These applications indicated are just an example. The versatility of the product combined with the technology used allows for endless possibilities.

Where to find Windform® products:

CRP Technology produces items in Windform® LX 2.0 and distributes the material in Europe and ROW. CRP USA produces items in Windform® LX 2.0 and distributes the material in the US and North America.
Both CRP Technology and CRP USA offer individually customized services for timing and method of delivery depending on the needs of the customer, anywhere in the world.

How to get Windform® products:

For any further information, requests for quotation, or to check delivery times, please visit our website www.windform.com or send an inquiry to info@windform.com (for Europe and ROW markets) or info@crp-usa.net (for US market). We will be in contact to answer all inquiries.



3D Printed steering wheel-mounted paddle shifters

WINDFORM® LX 2.0

WINDFORM® LX 2.0	Test Method	SI Unity	Windform® LX 2.0
General Properties			
Density (20° C)		g/cc	1,311
Colour			BLACK
Thermal Properties			
Melting point	ASTM D 3418	°C	180
HDT, 1.82 Mpa	ASTM D 648	°C	175,7
Vicat 10N	ASTM D 1252	°C	177,8
Mechanical Properties			
Tensile Strength	UNI EN ISO 527-1 UNI EN ISO 527-2	Mpa	59,9
Tensile Modulus	UNI EN ISO 527-1 UNI EN ISO 527-2	Mpa	6248
Elongation at break	UNI EN ISO 527-1 UNI EN ISO 527-2	%	2,3
Flexural Strength	UNI EN ISO 14125	Mpa	92,2
Flexural Modulus	UNI EN ISO 14125	Mpa	4860
Impact Strength Unnotched (Charpy 23°C)	ASTM D256 – UNI EN ISO 179	KJ/m^2	18,14
Impact Strength Notched (Charpy 23°C)	ASTM D256 – UNI EN ISO 179	KJ/m^2	4,37
Electrical Properties			
CTI - Comparative Tracking Index	IEC 60112:2003		600
Surface Finish			
After SLS Process		Ra µm	7,5
After manual finishing		Ra µm	3,2
After CNC machining		Ra µm	1,2
Properties per Density Unit			
UTS per density unit		Mpa/(g/cc)	45,69
Tensile Modulus per density unit		Mpa/(g/cc)	4765,8

Note: these are all indicative values. Data was generated from the testing of parts produced with Windform® LX 2.0 material under optimal processing conditions.
Standard Technical Details for Accuracy versus Tolerance:
For parts up to 6" (150 mm) the standard tolerance is: +/- 0.012 inches (0,3 mm)
For parts more than 6" (150 mm) the standard tolerance is: +/- 0.002 inches per inch (0,05 mm per 25 mm)
Example: For a 9" (229 mm) part, the standard tolerance would be: +/- 0.018 inches (0,46 mm).

WINDFORM® LX 2.0

WINDFORM® LX 2.0	Test Method	US Unit	Windform® LX 2.0
General Properties			
Density (68° F)		g/cc	1.311
Colour			BLACK
Thermal Properties			
Melting point	ASTM D 3418	°F	356
HDT, 1.82 Mpa	ASTM D 648	°F	348
Vicat 10N	ASTM D 1252	°F	352
Mechanical Properties			
Tensile Strength	UNI EN ISO 527-1 UNI EN ISO 527-2	psi	8690
Tensile Modulus	UNI EN ISO 527-1 UNI EN ISO 527-2	ksi	906
Elongation at break	UNI EN ISO 527-1 UNI EN ISO 527-2	%	2.3
Flexural Strength	UNI EN ISO 14125	psi	13400
Flexural Modulus	UNI EN ISO 14125	ksi	705
Impact Strength Unnotched (Charpy 73.4°F)	ASTM D256 – UNI EN ISO 179	ft-lb/in^2	8.63
Impact Strength Notched (Charpy 73.4°F)	ASTM D256 – UNI EN ISO 179	ft-lb/in^2	2.08
Electrical Properties			
CTI - Comparative Tracking Index	IEC 60112:2003		600
Surface Finish			
After SLS Process		Ra µm	7.5
After manual finishing		Ra µm	3.2
After CNC machining		Ra µm	1.2
Properties per Density Unit			
UTS per density unit		psi/(g/cc)	6630
Tensile Modulus per density unit		ksi/(g/cc)	691

Note: these are all indicative values. Data was generated from the testing of parts produced with Windform® LX 2.0 material under optimal processing conditions.
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