WINDFORM® RL

Class of material: Thermoplastic Elastomer Material

Technology: Selective Laser Sintering

Windform® RL is a durable thermoplastic elastomer material with exceptional rubber-like distinguishing features.
Its mechanical characteristics make it particularly suited for Additive Manufacturing applications requiring complex geometries, and where flexible characteristics is a key requisite.
It shows excellent durability and stability: it accommodates chemicals and heat resistance and combines superior tear resistance with burst strength.
Windform® RL withstands repeated bending and deformation. It allows to manufacture accurate, reliable, and long lasting prototypes and durable end-use parts. It also guarantees accurate and superior surface finish and fine details.
Due to its main properties, Windform® RL assures high performance sealing power.
Windform® RL Seal Infiltration creates watertight barrier. It is available in a wide range of colours.

Applications:

Functional rubber-like prototypes and parts (e.g. gaskets and hoses), durable components.
Windform® RL is the material of choice for athletic footwear and equipment, and for all those parts requiring flexibility and good shock absorption.
Its use allows to manufacture "soft-touch" items with non-slip surfaces e.g. handles and overmolded grips.
Windform® RL is the material for simulating cast urethane, thermoplastic elastomer, rubber and silicone parts along with complex production, functional and F3 prototypes (prototypes to test form, fit and function).
It is also suitable for parts that require joining with adhesives.
These applications indicated are just examples. The versatility of the product combined with the technology used, allows for near endless possibilities.

Where to find Windform® products

CRP Technology produces items in Windform® RL and distributes the material in Europe and ROW. CRP USA produces items in Windform® RL 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.

Energica electric motorbike 3D printed soft seat in Windform® RL combined with seat plate in Windform® GT for pre-production series

WINDFORM® RL

WINDFORM® RL	Test Method	SI Unity	Sintered value	Value After Windform® RL Seal infiltration
General Properties				
Density		g/cm^3	0,45	0,45
Particle size			100% < 160 microns	100% < 160 microns
Melting point	ISO 11357	°C	190	191
Mechanical Properties				
Tensile Strength	ISO 37:2017	Mpa	5,2	5,0
Tensile Modulus	ISO 37:2017	Mpa	20,0	20,3
Elongation at break	ISO 37:2017	%	397,1	383,6
Shore A Hardness	ASTM D2240-15e1		84,8	83,0

Note: these are all indicative values. Data was generated from the testing of parts produced with Windform® RL 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® RL

WINDFORM® RL	Test Method	US Unit	Sintered value	Value After Windform® RL Seal infiltration
General Properties				
Density		g/cm^3	0.45	0.45
Particle size			100% < 160 microns	100% < 160 microns
Melting point	ISO 11357	°F	374	375.8
Mechanical Properties				
Tensile Strength	ISO 37:2017	psi	754.20	725.19
Tensile Modulus	ISO 37:2017	psi	2900.75	2944.26
Elongation at break	ISO 37:2017	%	397.1	383.6
Shore A Hardness	ASTM D2240-15e1		84.8	83.0

Note: these are all indicative values. Data was generated from the testing of parts produced with Windform® RL 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® RL

Energica electric motorbike 3D printed seat with internal sandwich structure for customized pre-production series.
Material: rubber-like Windform® RL

CRP Technology S.r.l. (Europe and ROW)
Via Cesare della Chiesa, 150/C
Modena 41126 - ITALY
www.crptechnology.com
www.windform.com
info@windform.com

CRP USA LLC (Usa)
127 Goodwin Circle
Mooresville, NC - 28115
www.crp-usa.net
www.windform.com
info@crp-usa.net