

# 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.

Windform® RL Shore A hardness value may vary in the range from 45 (Minimum) to 80 (Maximum).

Due to its main properties, Windform® RL assures high performance sealing power.

Windform® RL Seal Infiltration is a method for strengthening, coloring and sealing Windform® RL parts. Windform® RL Seal Infiltration enhances the strength at break and 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](http://www.windform.com) or send an inquiry to [info@windform.com](mailto:info@windform.com) (for Europe and ROW markets) or [info@crp-usa.net](mailto: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	Windform® RL
<b>GENERAL PROPERTIES</b>			
Density		g/cm <sup>3</sup>	0,45
Particle size			100% < 160 microns
Melting point	DSC	°C	190
<b>MECHANICAL PROPERTIES</b>			
Tensile Strength	UNI EN ISO 527	Mpa	1,5 - 4,2
Tensile Modulus	UNI EN ISO 527	Mpa	6,5 - 8,0
Elongation at break	UNI EN ISO 527	%	130 - 160
Shore A Hardness	ASTM D2240		45 - 80

After Windform RL Seal infiltration : all values increases between 5% and 15%



**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	Windform® RL
<b>GENERAL PROPERTIES</b>			
Density		g/cm <sup>3</sup>	0.45
Particle size			100% < 160 microns
Melting point	DSC	°F	374
<b>MECHANICAL PROPERTIES</b>			
Tensile Strength	UNI EN ISO 527	psi	217.55 - 609.16
Tensile Modulus	UNI EN ISO 527	psi	942.74 - 1160.30
Elongation at break	UNI EN ISO 527	%	130 - 160
Shore A Hardness	ASTM D2240		45 - 80

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



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