

# RILSAN® CLEAR G850 RNEW®

PA,,GHT,C14-020

Rilsan® Clear G850 Rnew® is a high performance transparent copolyamide, partially based on renewable resources. This grade has been specially designed for injection molding applications, ideally suited for optic as high end eyewear frames.

According to ASTM D6866, the biobased carbon content is measured at 45%.

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
<b>RHEOLOGICAL PROPERTIES</b>			
Melt Volume-Flow Rate	4.4 / *	cm <sup>3</sup> /10 min	ISO 1133
Temperature	275 / *	°C	-
	527 / *	°F	-
Load	2.16 / *	kg	-
	4.76 / *	lb	-
Molding Shrinkage, parallel	0.9 / *	%	ISO 294-4, 2577
Molding Shrinkage, normal	0.9 / *	%	ISO 294-4, 2577
<b>MECHANICAL PROPERTIES</b>			
Poisson's ratio	0.393	-	-
Tensile Modulus	1680 / 1640	MPa	ISO 527-1/-2
	244000 / 238000	psi	
Yield Stress	64 / 58	MPa	ISO 527-1/-2
	9280 / 8410	psi	
Yield Strain	8.2 / 8.6	%	ISO 527-1/-2
Nominal Strain at Break	>50 / >50	%	ISO 527-1/-2
Stress at Break	56 / 53	MPa	ISO 527-1/-2
	8120 / 7690	psi	
Strain at Break	>50 / >50	%	ISO 527-1/-2
Flexural Modulus, 23°C	1560 / 1600	MPa	ISO 178
	226000 / 232000	psi	
Charpy Impact Strength, +23°C	No Break / No Break	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy Impact Strength, -30°C	No Break / No Break	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	8.5 / 15	kJ/m <sup>2</sup>	ISO 179/1eA
	4.04 / 7.14	ftlb/in <sup>2</sup>	
Charpy Notched Impact Strength, -30°C	8.6 / 11.4	kJ/m <sup>2</sup>	ISO 179/1eA
	4.09 / 5.42	ftlb/in <sup>2</sup>	

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 Source: automatically generated TDS from Material Database on 12-08-2024

# RILSAN<sup>®</sup>

## CLEAR G850 RNEW<sup>®</sup>

THERMAL PROPERTIES			
Glass Transition Temperature, 10°C/min	145 / *	°C	ISO 11357-1/-2
	293 / *	°F	
Temp. of Deflection Under Load, 1.80 MPa	120 / *	°C	ISO 75-1/-2
	248 / *	°F	
Temp. of Deflection Under Load, 0.45 MPa	135 / *	°C	ISO 75-1/-2
	275 / *	°F	
Burning Behav. at 1.5 mm Nominal Thickness	V-2 / *	class	IEC 60695-11-10
Thickness Tested	1.6 / *	mm	-
	0.0630 / *	in	
Yellow Card available	yes / *	-	-
Burning Behav. at Thickness h	HB / *	class	IEC 60695-11-10
Thickness Tested	0.8 / *	mm	-
	0.0315 / *	in	
Yellow Card available	yes / *	-	-
OTHER PROPERTIES			
%Bio-Based	45	-	ASTM D6866
Water Absorption, 23°C, immersion, equilibrium	4 / *	%	ISO 62
Humidity Absorption, 23°C, RH50%, equilibrium	1.7 / *	%	ISO 62
Density	1010 / 1010	kg/m <sup>3</sup>	ISO 1183
	1.01 / 1.01	g/cm <sup>3</sup>	
OPTICAL PROPERTIES			
Luminous Transmittance	92	%	ISO 13468-1, -2

### MAIN APPLICATIONS:

- Sun
- Structural frames of smart phones
- optical
- Watch covers
- reading glass frames
- Household appliances

### PACKAGING:

This grade is delivered dried in sealed packaging (25 kg bags) ready to be processed.

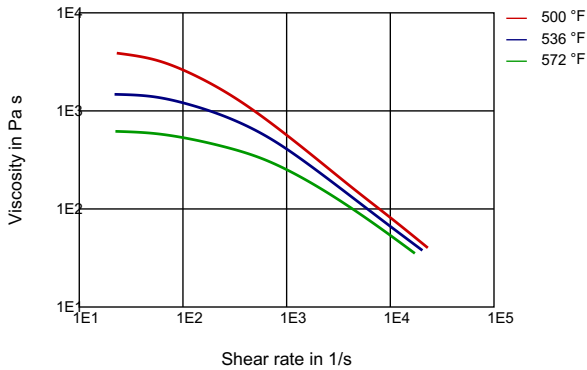
### SHELF LIFE:

Two years from the delivery. For any use above this limit, please refer to our technical services.

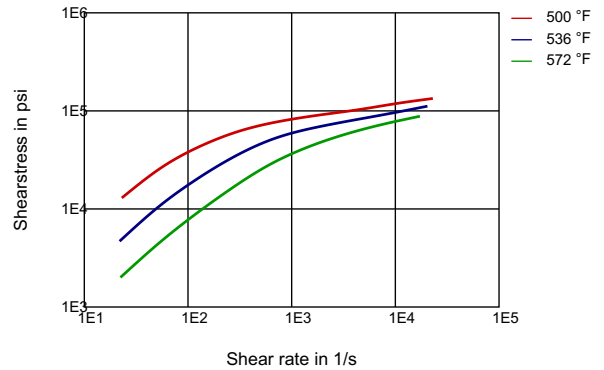
# RILSAN<sup>®</sup> CLEAR G850 RNEW<sup>®</sup>

## DIAGRAMS

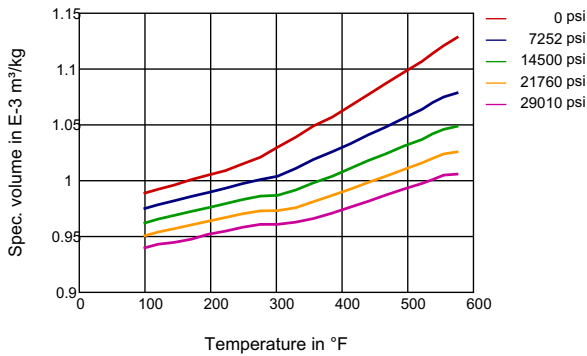
### VISCOSITY-SHEAR RATE



### SHEARSTRESS-SHEAR RATE



### SPECIFIC VOLUME-TEMPERATURE (PVT)



#### Injection Process conditions:

- Typical melt temperature (Min / Recommended / Max) : 250°C / 280°C / 300°C
- Typical mold temperature : 20 - 80 °C
- Drying time and temperature (only for bags opened for more than two hours): 4 - 6 hours at 90°C

#### Extrusion Process conditions:

- Typical melt temperature (Min / Recommended / Max) : 250°C / 270°C / 290°C
- Drying time and temperature (only for bags opened for more than two hours): 4 - 6 hours at 90°C

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## CLEAR G850 RNEW<sup>®</sup>

<b>PROCESSING</b> Injection Molding, Film Extrusion	<b>Headquarters:</b> Arkema France 420 rue d'Estienne d'Orves 92705 Colombes Cedex France T +33 (0)1 49 00 80 80 hpp.arkema.com  Arkema Inc. – High Performance Polymers 900 First Avenue King of Prussia, PA 19406 Tel.: +1 610 205 7000 hpp.arkema.com
<b>DELIVERY FORM</b> Pellets	
<b>SPECIAL CHARACTERISTICS</b> Bio-Based, Food Contact Approval, Heat Stabilized, Transparent	
<b>REGIONAL AVAILABILITY</b> North America, Europe, Asia Pacific, South and Central America, Near East/Africa	

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