RILSAN®
CLEAR RNEW

TECHNICAL DATA SHEET

RILSAN® CLEAR G850 RNEW®

TRANSPARENT LONG-CHAIN POLYAMIDE

RILSAN® CLEAR G850 RNEW® is a high performance transparent amorphous polyamide. It is partially produced from a renewable and sustainable source (castor oil). This grade has been specially designed for injection molding applications, ideally suited for optic as high-end eyewear frames.

Designation : ISO 16396 - PA, G1HT, C14-020

TYPE

PA*

POTENTIAL APPLICATIONS

- Consumer electronics
- Eyewear (sports & leisure)
- Footwear

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

ADDITIVES

- Heat Stabilized

RHEOLOGICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Shrinkage, parallel (t+24h)	0.9	%	ISO 294-4
Shrinkage, normal (t+24h)	0.9	%	ISO 294-4
Melt volume flow rate (MVR), 275°C / 2.16 kg (527°F / 4.4 lb)	4.4	cm³/10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Flexural modulus, 23°C (73°F)	- / 1600	MPa	ISO 178
Tensile modulus, 23°C (73°F)	1680 / 1640	MPa	ISO 527-1/-2
Yield strain, 23°C (73°F)	8.2 / 8.6	%	ISO 527-1/-2
Yield stress, 23°C (73°F)	64 / 58	MPa	ISO 527-1/-2
Stress at break, 23°C (73°F)	- / 53	MPa	ISO 527-1/-2
Nominal strain at break, 23°C (73°F)	> 50 / > 50	%	ISO 527-1/-2
Charpy unnotched impact strength, 23°C (73°F)	No break / No break		ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	No break / No break		ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	- / 8.5	kJ/m2	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	8.6 / 11.4	kJ/m2	ISO 179 1eA

* DRY / COND
DRY: Dry As Molded (DAM) if pellet / Dry if powder.
COND: Conditionned.

RILSAN® CLEAR G850 RNEW®

THERMAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Glass transition temperature, 10°C/min	145	°C	ISO 11357-1/-2
Heat deflection temperature, 0.45 MPa	135	°C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	120	°C	ISO 75-1/-2
Burning behavior, nominal thickness 0.8 mm	HB75		IEC 60695-11-10
Burning behavior, nominal thickness 1.6 mm	V-2		IEC 60695-11-10
Yellow card available	Yes		

OTHER PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Bio-based carbon content, measured	45	%	ASTM D6866
Water absorption, at equilibrium at 23°C (73°F) / 50%RH	1.7	%	ISO 62
Density, 23°C (73°F)	1.01	g/cm³	ISO 1183-1
Transmittance (560 nm, 2 mm)	91.7	%	ASTM D1003
Refractive index, 23°C (73°F)	1.511		ISO 489 (Method A)
Water absorption, at equilibrium at 23°C (73°F) / Immersion	4	%	ISO 62

SHELF LIFE

Two years from the date of delivery, when stored properly (sealed bags, appropriate moisture, UV protection and temperature). For any use above this limit, please refer to our technical services.

PROCESSING RECOMMENDATIONS

Please refer to specific grade's processing guidelines

- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 260°C / 280°C / 300°C (500°F / 535°F / 570°F)
- Typical mold temperature - Injection molding: 20-80°C (70-175°F)
- Drying Conditions (only for bags opened for more than 2 hours): 90°C (195°F) / 4-6 hours

SPECIAL CHARACTERISTICS

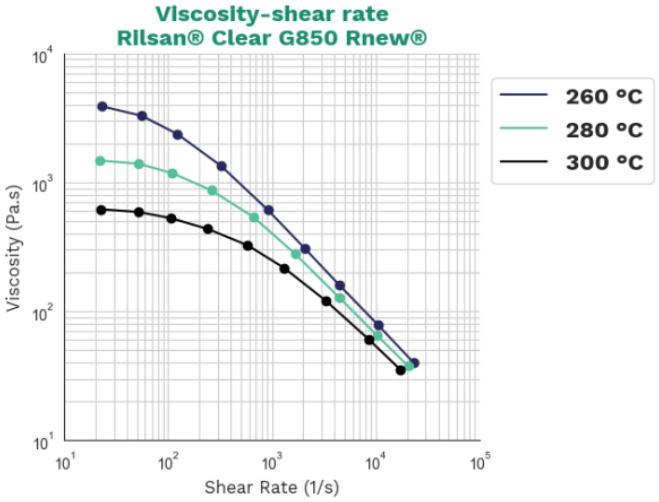
- Bio-based
- Transparent

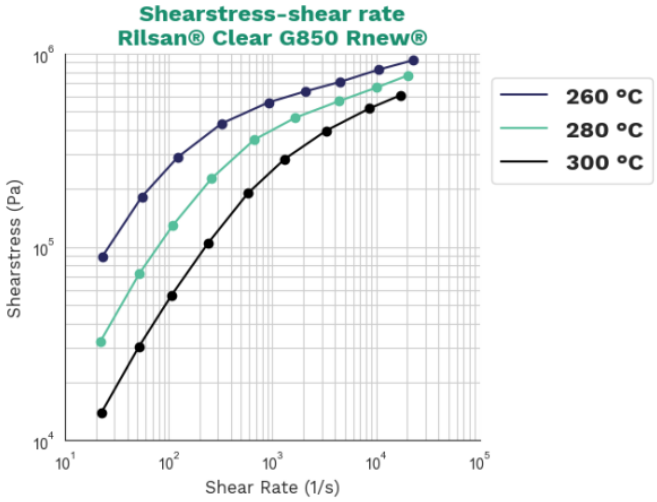
REGIONAL AVAILABILITY

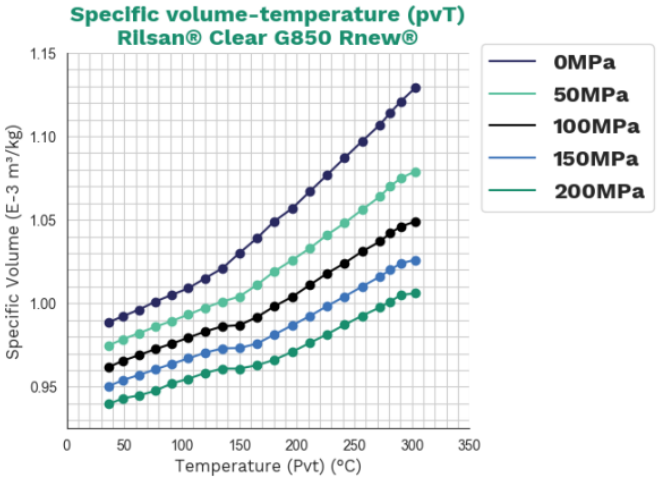
World

RILSAN® CLEAR G850 RNEW®

DIAGRAMS







Headquarters: Arkema France
51, Esplanade du Général de Gaulle
92800 Puteaux – France
T +33 (0)1 49 00 80 80

Disclaimer - Please consult Arkema's disclaimer regarding the use of Arkema's products on https://www.arkema.com/global/en/products/product-safety/disclaimer/ which is incorporated herein by reference and made a part hereof.
Arkema France, a French société anonyme registered at the Trade and Companies Register of Nanterre under the number 319 632 790

arkema.com