

TECHNICAL DATA SHEET

RILSAN® CLEAR G850 RNEW®

AMORPHOUS POLYAMIDE PELLET

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*

MAIN APPLICATIONS

- Footwear - Outsole/Components
- Optics And Oth. Cons. Goods - Others
- Frames
- Accessories
- Laptop / Desktop
- Smartphone / Tablet
- Home Appliance

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

ADDITIVES

- Heat Stabilized

RHEOLOGICAL PROPERTIES

PROPERTIES	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	DRY / COND VALUE*	UNIT	TEST STANDARD
Flexural modulus, 23°C (73°F)	- / 1600	MPa	ISO 178
Tensile modulus, 23°C (73°F), 1 mm/min	1680 / 1640	MPa	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	8.2 / 8.6	%	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	64 / 58	MPa	ISO 527-1/-2
Nominal strain at break, 23°C (73°F), 50 mm/min	> 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: Dry As Molded (DAM) if pellet / Dry if powder.
COND: Conditioned.

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THERMAL PROPERTIES

PROPERTIES	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, minimum thickness 0.8 mm	HB		IEC 60695-11-10
Burning behavior, minimum thickness 1.5 mm	V-2		IEC 60695-11-10
Yellow card available	YES		

OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Bio-based carbon content, Measured	45	%	ASTM D6866
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	1.7	%	ISO 62
Water absorption, 23°C (73°F), immersion, equilibrium	4	%	ISO 62
Specific gravity, 23°C (73°F)	1.01	g/cm ³	ISO 1183-1

PACKAGING

Available packaging:

- 25 kg / 55 lb bags

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 CONDITIONS:

- 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 time and temperature: 90°C (195°F) / 4-6 hours

SPECIAL CHARACTERISTICS

- Bio-based
- Transparent

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DIAGRAMS

