

TECHNICAL DATA SHEET

RILSAN® CLEAR G820 RNEW®

AMORPHOUS POLYAMIDE PELLET

RILSAN® CLEAR G820 RNEW® is a high performance transparent polyamide with outstanding chemical resistance and stress cracking resistance. It is partially produced from a renewable and sustainable source (castor oil). This grade has been designed for injection molding applications.

Designation : ISO 16396 - PA, M1G1HT, C14-020

TYPE

PA*

MAIN APPLICATIONS

- Frames
- Beauty - Packaging
- Accessories
- Laptop / Desktop
- Smartphone / Tablet
- Others
- Home Appliance
- Industry - Distribution
- Automotive/Truck - Automotive Coating

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

ADDITIVES

- Heat Stabilized

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Shrinkage, Parallel (t+24h)	0.6	%	ISO 294-4
Shrinkage, Normal (t+24h)	0.7	%	ISO 294-4
Melt volume flow rate (MVR), 275°C / 2.16 kg (527°F / 4.4 lb)	8	cm³/10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Flexural modulus, 23°C (73°F)	- / 1585	MPa	ISO 178
Tensile modulus, 23°C (73°F), 1 mm/min	- / 1670	MPa	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	- / 66	MPa	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	- / 7	%	ISO 527-1/-2
Nominal strain at break, 23°C (73°F), 50 mm/min	- / > 50	%	ISO 527-1/-2
Charpy unnotched impact strength, 23°C (73°F)	- / No break		ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	- / No break		ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	- / 6	kJ/m²	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	- / 9	kJ/m²	ISO 179 1eA
Hardness, Shore D, 15 s	- / 76		ISO 868

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

RILSAN® CLEAR G820 RNEW®

COND: Conditionned.

THERMAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Glass transition temperature, 10°C/min	101	°C	ISO 11357-1/-2
Heat deflection temperature, 0.45 MPa	85	°C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	73	°C	ISO 75-1/-2

OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	1.2	%	ISO 62
Bio-based carbon content, Measured	62	%	ASTM D6866
Water absorption, 23°C (73°F), immersion, equilibrium	2.5	%	ISO 62
Density, 23°C (73°F)	1	g/cm³	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: 80°C (175°F) / 4-6 hours

SPECIAL CHARACTERISTICS

- Bio-based
- Transparent

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