

TECHNICAL DATA SHEET

**RILSAN® CLEAR G850 RNEW® MED**

**AMORPHOUS POLYAMIDE PELLET**

RILSAN® CLEAR G850 RNEW® MED is a transparent amorphous polyamide. It is partially produced from a renewable and sustainable source (castor oil). This grade with very high purity is approved in medical applications. Upon request, letters regarding USP Class VI compliance can be provided.

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

**DESIGNATION**

PA\*

**MAIN APPLICATIONS**

- Health - Reusable - Components
- Health - Reusable - Mask

**DELIVERY FORM**

- Pellets

**TRANSFORMATION PROCESSES**

- Injection Molding

**ADDITIVES**

- Heat Stabilized

**RHEOLOGICAL PROPERTIES**

PROPERTIES	VALUE	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 cm <sup>3</sup> /10min	ISO 1133

**MECHANICAL PROPERTIES**

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Hardness, Shore D, 15 s	- / 80	ISO 868
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
Nominal strain at break, 23°C (73°F), 50 mm/min	> 50 / > 50 %	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
Tensile modulus, 23°C (73°F), 1 mm/min	1680 / 1640 MPa	ISO 527-1/-2
Charpy notched impact strength, 23°C (73°F)	- / 8.5 kJ/m <sup>2</sup>	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	8.6 / 11.4 kJ/m <sup>2</sup>	ISO 179 1eA
Flexural modulus, 23°C (73°F)	- / 1600 MPa	ISO 178

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

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## THERMAL PROPERTIES

PROPERTIES	VALUE	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

## OTHER PROPERTIES

PROPERTIES	VALUE	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 <sup>3</sup>	ISO 1183-1

## PACKAGING

This grade is delivered dried in sealed packaging ready to be processed. 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.

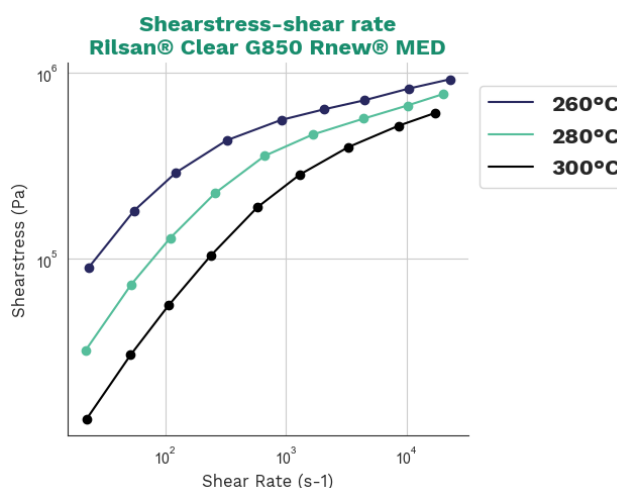
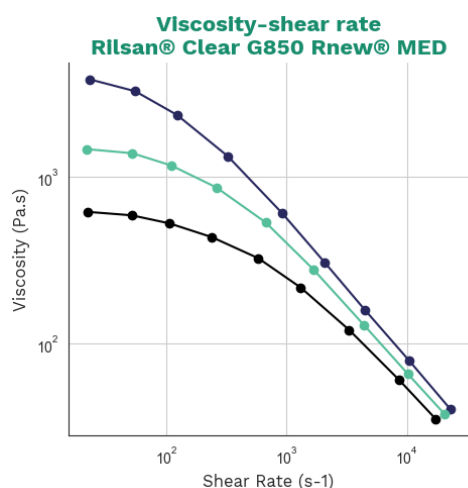
## PROCESSING CONDITIONS:

- 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

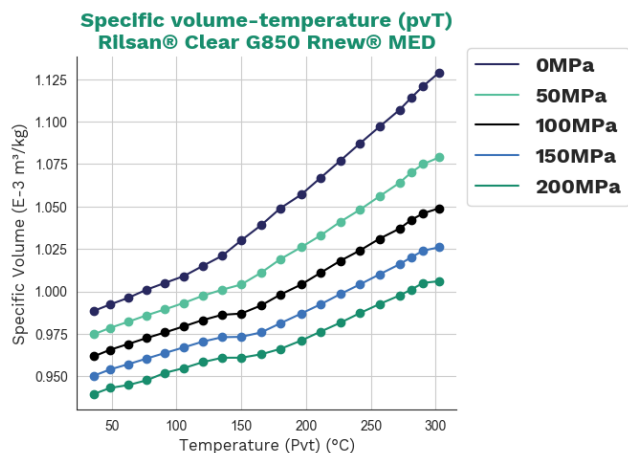
## SPECIAL CHARACTERISTICS

- Bio-based
- Transparent

## DIAGRAMS



# RILSAN® CLEAR G850 RNEW® MED



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