

# DuPont™ Sorona® FG3015G NC010

## RENEWABLY SOURCED™ THERMOPLASTIC POLYMER

### Product Information

Sorona® FG3015G NC010 is a 15% glass fiber reinforced polytrimethylene terephthalate resin containing 31% renewably sourced ingredients by weight (37% based on polymer only). It has been developed for consideration into applications such as parts for the food industry.

### FOOD CONTACT

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications in Europe and the USA when meeting applicable use conditions. For details, individual compliance statements are available from your DuPont representative.

General information	Value	Unit	Test Standard
Resin Identification	PTT-GF15	-	ISO 1043
Part Marking Code	>PTT-GF15<	-	ISO 11469
Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate	13	cm <sup>3</sup> /10min	ISO 1133
Temperature	250	°C	ISO 1133
Load	2.16	kg	ISO 1133
Moulding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.7	%	ISO 294-4, 2577
Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	6500	MPa	ISO 527-1/-2
Stress at break	120	MPa	ISO 527-1/-2
Strain at break	2.5	%	ISO 527-1/-2
Flexural Modulus	5800	MPa	ISO 178
Flexural Strength	160	MPa	ISO 178
Charpy impact strength, 23°C	25	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	5.5	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, 23°C	5.5	kJ/m <sup>2</sup>	ISO 180/1A
Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	227	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
1.8 MPa	200	°C	
0.45 MPa	223	°C	
Flammability	Value	Unit	Test Standard
Burning Behav. at 1.5mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
Other properties	Value	Unit	Test Standard
Density	1440	kg/m <sup>3</sup>	ISO 1183
Density of melt	1250	kg/m <sup>3</sup>	-
Injection	Value	Unit	Test Standard
Drying Recommended	yes	-	-
Drying Temperature	120	°C	-
Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.02	%	-
Melt Temperature Optimum	260	°C	-
Min. melt temperature	250	°C	-
Max. melt temperature	270	°C	-
Mold Temperature Optimum	100	°C	-
Min. mould temperature	80	°C	-
Max. mould temperature	110	°C	-
Back pressure	As low as possible		-
Ejection temperature	175	°C	-

### Characteristics

- Processing
- Injection Moulding

Revised: 2016-11-23

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To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

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Delivery form  
Additives

- Pellets
- Release agent

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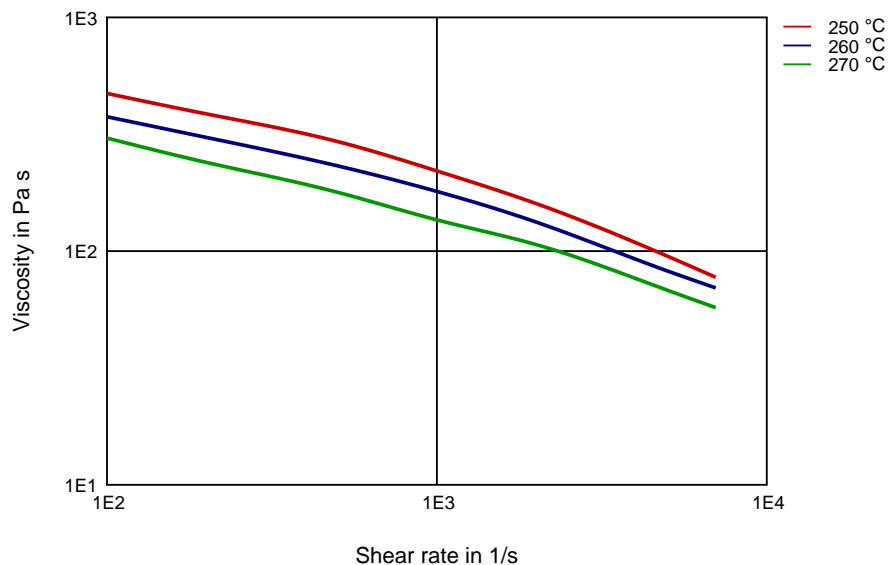


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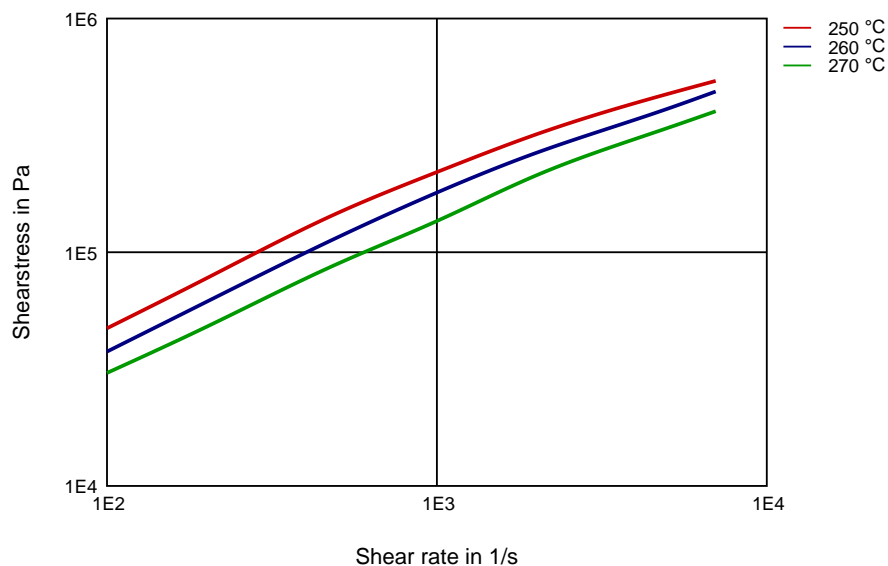
## RENEWABLY SOURCED™ THERMOPLASTIC POLYMER

### Diagrams

#### Viscosity-shear rate



#### Shearstress-shear rate



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## RENEWABLY SOURCED™ THERMOPLASTIC POLYMER

### Chemical Media Resistance

#### Acids

- ✓ Acetic Acid (5% by mass) (23°C)
- ✓ Citric Acid solution (10% by mass) (23°C)
- ✓ Lactic Acid (10% by mass) (23°C)
- ✗ Hydrochloric Acid (36% by mass) (23°C)
- ✗ Nitric Acid (40% by mass) (23°C)
- ✗ Sulfuric Acid (38% by mass) (23°C)
- ✗ Sulfuric Acid (5% by mass) (23°C)
- ✗ Chromic Acid solution (40% by mass) (23°C)

#### Bases

- ✗ Sodium Hydroxide solution (35% by mass) (23°C)
- ✓ Sodium Hydroxide solution (1% by mass) (23°C)
- ✓ Ammonium Hydroxide solution (10% by mass) (23°C)

#### Alcohols

- ✓ Isopropyl alcohol (23°C)
- ✓ Methanol (23°C)
- ✓ Ethanol (23°C)

#### Hydrocarbons

- ✓ n-Hexane (23°C)
- ✓ Toluene (23°C)
- ✓ iso-Octane (23°C)

#### Ketones

- ✓ Acetone (23°C)

#### Ethers

- ✓ Diethyl ether (23°C)

#### Mineral oils

- ✓ SAE 10W40 multigrade motor oil (23°C)
- ✗ SAE 10W40 multigrade motor oil (130°C)
- ✗ SAE 80/90 hypoid-gear oil (130°C)
- ✓ Insulating Oil (23°C)

#### Standard Fuels

- ✗ ISO 1817 Liquid 1 - E5 (60°C)
- ✗ ISO 1817 Liquid 2 - M15E4 (60°C)
- ✗ ISO 1817 Liquid 3 - M3E7 (60°C)
- ✗ ISO 1817 Liquid 4 - M15 (60°C)
- ✓ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- ✓ Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)



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## RENEWABLY SOURCED™ THERMOPLASTIC POLYMER

- ✓ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)
- ✓ Diesel fuel (pref. ISO 1817 Liquid F) (90°C)
- ✗ Diesel fuel (pref. ISO 1817 Liquid F) (>90°C)

### Salt solutions

- ✓ Sodium Chloride solution (10% by mass) (23°C)
- ✓ Sodium Hypochlorite solution (10% by mass) (23°C)
- ✓ Sodium Carbonate solution (20% by mass) (23°C)
- ✓ Sodium Carbonate solution (2% by mass) (23°C)
- ✓ Zinc Chloride solution (50% by mass) (23°C)

### Other

- ✓ Ethyl Acetate (23°C)
- ✗ Hydrogen peroxide (23°C)
- ✗ DOT No. 4 Brake fluid (130°C)
- ✗ Ethylene Glycol (50% by mass) in water (108°C)
- ✓ 1% nonylphenoxy-polyethyleneoxy ethanol in water (23°C)
- ✓ 50% Oleic acid + 50% Olive Oil (23°C)
- ✓ Water (23°C)
- ✗ Water (90°C)
- ✓ Phenol solution (5% by mass) (23°C)

### Symbols used:

- ✓ possibly resistant

Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

- ✗ not recommended - see explanation

Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 4mm (Hytrel® measured at 2 mm), IEC Electrical properties measured at 2mm, all ASTM properties measured at 3.2mm, and test temperatures are 23°C unless otherwise stated.

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