



**UL 746B** 

**UL 746B** 

**UL 746B** 

**UL 746B** 

**UL 746B** 

# Rynite® SST35 NC010

# THERMOPLASTIC POLYESTER RESIN

## ISO 1043: PET-HIGF35

Common features of Rynite® thermoplastic polyester include mechanical and physical properties such as excellent balance of strength and stiffness, dimensional stability, creep resistance, heat resistance, outstanding colour stability, high surface gloss and inherent good electrical properties. It can be processed over a broad temperature range and has excellent flow properties.

The good melt stability of Rynite® thermoplastic polyester normally enables the recycling of properly handled production waste. If recycling is not possible, we recommend, as the preferred option, incineration with energy recovery (-22 kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Rynite® thermoplastic polyester typically is used in demanding applications in the automotive, electrical and electronics, appliances, mechanical engineering industry, where they successfully replace metals and thermosets as well as other thermoplastic polymers.

Rynite® SST35 is a 35% glass fibre reinforced, super tough, modified polyethylene terephthalate for injection moulding.

It has excellent impact resistance and surface aspect.

Food compliance:

Not compliant

### **Product information**

RTI, impact, 1.5mm

RTI, impact, 3.0mm

RTI, strength, 0.75mm

RTI, strength, 1.5mm

RTI, strength, 3.0mm

Resin Identification	PET-HIGF35		ISO 1043
Part Marking Code	>PET-HIGF35<		ISO 11469
Typical mechanical properties			
Tensile modulus	7500	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	90	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	6	%	ISO 527-1/-2
Compressive strength	80	MPa	ISO 604
Poisson's ratio	0.34		
Thermal properties			
Coefficient of linear thermal expansion (CLTE), normal	130	E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.21	W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	1.2E-7	m²/s	ISO 22007-4
Specific heat capacity of melt	1700	J/(kg K)	ISO 22007-4
RTI, electrical, 0.75mm	150	°C	UL 746B
RTI, electrical, 1.5mm	150	°C	UL 746B
RTI, electrical, 3.0mm	150	°C	UL 746B
RTI, impact, 0.75mm	150	°C	UL 746B

Printed: 2025-05-30 Page: 1 of 8

150 °C

150 °C

150 °C

150 °C

150 °C





# THERMOPLASTIC POLYESTER RESIN

# Flammability

Burning Behav. at 1.5mm nom. thickn.	НВ	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
UL recognition	yes		UL 94
Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.75	mm	IEC 60695-11-10
UL recognition	yes		UL 94
FMVSS Class	В		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	mm/min	ISO 3795 (FMVSS 302)

# **Electrical properties**

Relative permittivity, 100Hz	5	IEC 62631-2-1
Relative permittivity, 1000Hz	4.7	IEC 62631-2-1
Relative permittivity, 1MHz	4.4	IEC 62631-2-1
Electric strength	29 kV/mm	IEC 60243-1
Comparative tracking index	500	IEC 60112

## Physical/Other properties

Density	1520 kg/m <sup>3</sup>	ISO 1183
Density of melt	1400 kg/m <sup>3</sup>	

## Injection

Drying Recommended	yes	
Drying Temperature	120	°C
Drying Time, Dehumidified Dryer	4 - 6	
Processing Moisture Content	≤0.02 <sup>[1]</sup>	%
Melt Temperature Optimum	285	°C
Min. melt temperature	270	°C
Max. melt temperature	290	°C
Screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	95	°C
Min. mould temperature	75	°C
Max. mould temperature	95	°C
Hold pressure range	≥80	MPa
Hold pressure time	4	s/mm
Back pressure	As low as	MPa
	possible	
Ejection temperature	170	°C

[1]: At levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects.

## Characteristics

Processing Injection Moulding

Delivery form Pellets

Additives Release agent

Special characteristics Heat stabilised or stable to heat

Printed: 2025-05-30 Page: 2 of 8





# THERMOPLASTIC POLYESTER RESIN

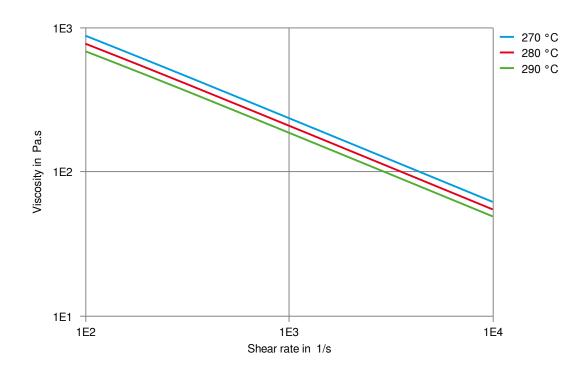
## **Automotive**

OEM STANDARD

Stellantis - Chrysler MS.50103 / CPN-3587 Stellantis - Chrysler MS.50103 / CPN-3594 ADDITIONAL INFORMATION

Natural Natural

# Viscosity-shear rate



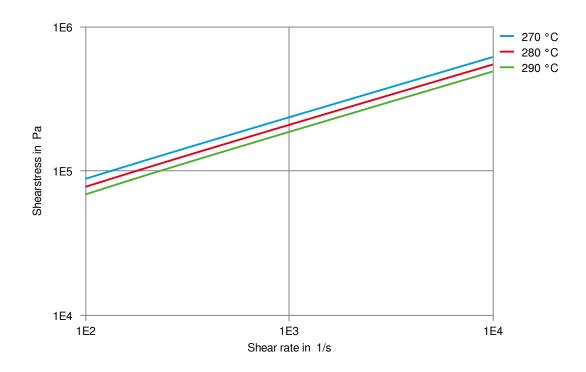
Printed: 2025-05-30 Page: 3 of 8





THERMOPLASTIC POLYESTER RESIN

Shearstress-shear rate



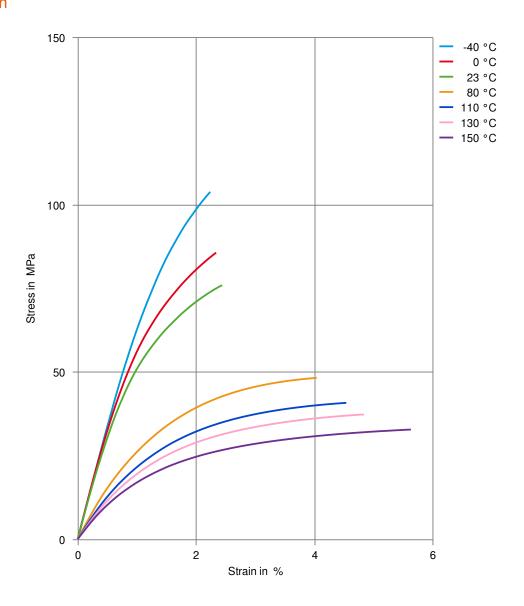
Printed: 2025-05-30 Page: 4 of 8





# THERMOPLASTIC POLYESTER RESIN

## Stress-strain



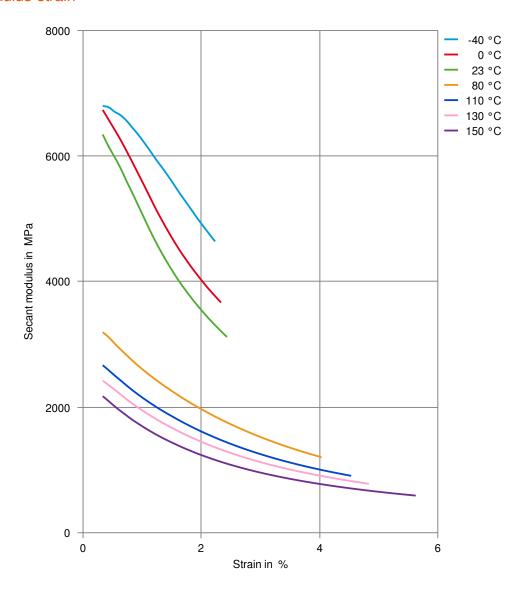
Printed: 2025-05-30 Page: 5 of 8





# THERMOPLASTIC POLYESTER RESIN

# Secant modulus-strain



Printed: 2025-05-30 Page: 6 of 8

(+) 18816996168 Ponciplastics.com



# Rynite® SST35 NC010

# THERMOPLASTIC POLYESTER RESIN

### 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
- X Hydrochloric Acid (36% by mass), 23°C
- X Nitric Acid (40% by mass), 23°C
- X Sulfuric Acid (38% by mass), 23°C
- X Sulfuric Acid (5% by mass), 23°C
- X Chromic Acid solution (40% by mass), 23°C

#### Bases

- X 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
- X 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
- ✓ 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

Printed: 2025-05-30 Page: 7 of 8





## THERMOPLASTIC POLYESTER RESIN

- ✓ 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
- X Hydrogen peroxide, 23°C
- X 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
- X 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).

x 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).

Printed: 2025-05-30 Page: 8 of 8

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, pr

© 2025 Celanese or its affiliates. All rights reserved. Celanese®, registered C-ball design and all other trademarks identified herein with ®, TM, SM, unless otherwise noted, are trademarks of Celanese or its affiliates. Fortron is a registered trademark of Fortron Industries LLC.