



ISO 1043

ISO 294-4

ISO 294-4

## Crastin® LW9330 NC010

### THERMOPLASTIC POLYESTER RESIN

Common features of Crastin® thermoplastic polyester resin include mechanical and physical properties such as stiffness and toughness, heat resistance, friction and wear resistance, excellent surface finishes and good colourability. Crastin® thermoplastic polyester resin has excellent electrical insulation characteristics and high arc-resistant grades are available. Many flame retardant grades have UL recognition (class V-0). Crastin® thermoplastic polyester resin typically has high chemical and heat ageing resistance.

The good melt stability of Crastin® thermoplastic polyester resin normally enables the recycling of properly handled production waste. If recycling is not possible, we recommend, as the preferred option, incineration with energy recovery (-24 kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Crastin® thermoplastic polyester resin typically is used in demanding applications in the electronics, electrical, automotive, mechanical engineering, chemical, domestic appliances and sporting goods industry.

Crastin® LW9330 NC010 is a 30% glass fiber reinforced polybutylene terephthalate blend for injection moulding. It has improved surface aesthetics, excellent dimensional stability and low warpage characteristics.

PBT+SAN-

IGF30

0.25 %

0.15 %

## Product information Resin Identification

>PBT+SAN-IGF3	30<	ISO 11469
10	cm <sup>3</sup> /10min	ISO 1133
250	°C	
5	kg	
13	g/10min	ISO 1133
250	°C	
5	kg	
0.3	%	ISO 294-4, 2577
0.6	%	ISO 294-4, 2577
	10 250 5 13 250 5 0.3	>PBT+SAN-IGF30<  10 cm³/10min 250 °C 5 kg 13 g/10min 250 °C 5 kg 0.3 % 0.6 %

#### Typical mechanical properties

Postmoulding shrinkage, normal, 48h at 80°C

Postmoulding shrinkage, parallel, 48h at 80°C

7	Fensile modulus 98	300	MPa	ISO 527-1/-2
7	Tensile stress at break, 5mm/min	35	MPa	ISO 527-1/-2
٦	Гensile strain at break, 5mm/min	2.3	%	ISO 527-1/-2
F	Flexural modulus 84	-00	MPa	ISO 178
F	Flexural strength 2	200	MPa	ISO 178
(	Charpy impact strength, 23°C	55	kJ/m²	ISO 179/1eU
(	Charpy impact strength, -40°C	50	kJ/m²	ISO 179/1eU
(	Charpy notched impact strength, 23°C	9	kJ/m <sup>2</sup>	ISO 179/1eA
(	Charpy notched impact strength, -30°C	9	kJ/m <sup>2</sup>	ISO 179/1eA
(	Charpy notched impact strength, -40°C	9	kJ/m <sup>2</sup>	ISO 179/1eA
I	zod notched impact strength, 23°C	7	kJ/m <sup>2</sup>	ISO 180/1A
I	zod notched impact strength, -40°C	7.0	kJ/m <sup>2</sup>	ISO 180/1A
I	zod impact strength, 23°C	45	kJ/m <sup>2</sup>	ISO 180/1U
I	zod impact strength, -40°C	45	kJ/m²	ISO 180/1U

Printed: 2025-05-30 Page: 1 of 12

Revised: 2025-04-17 Source: Celanese Materials Database





## THERMOPLASTIC POLYESTER RESIN

Poisson's ratio	0.34		
Thermal properties			
Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	110		ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	185		ISO 75-1/-2
Ball pressure test	195		IEC 60695-10-2
Coefficient of linear thermal expansion		E-6/K	ISO 11359-1/-2
(CLTE), parallel			
Coefficient of linear thermal expansion (CLTE),	125	E-6/K	ISO 11359-1/-2
normal			
Thermal conductivity of melt	0.28	W/(m K)	ISO 22007-2
Specific heat capacity of melt	1790	J/(kg K)	ISO 22007-4
RTI, electrical, 0.75mm	130	°C	UL 746B
RTI, electrical, 1.5mm	130	°C	UL 746B
RTI, electrical, 3.0mm	130	°C	UL 746B
RTI, impact, 0.75mm	125	°C	UL 746B
RTI, impact, 1.5mm	125		UL 746B
RTI, impact, 3.0mm	130		UL 746B
RTI, strength, 0.75mm	130		UL 746B
RTI, strength, 1.5mm	130		UL 746B
RTI, strength, 3.0mm	130	°C	UL 746B
TGA curve	available		ISO 11359-1/-2
Flammability			
Burning Behav. at 1.5mm nom. thickn.	НВ	class	IEC 60695-11-10
Thickness tested		mm	IEC 60695-11-10
UL recognition	yes		UL 94
Burning Behav. at thickness h		class	IEC 60695-11-10
Thickness tested			
	0.75	mm	IEC 60695-11-10
UL recognition	0.75 yes	mm	IEC 60695-11-10 UL 94
UL recognition	yes	°C	UL 94
UL recognition Glow Wire Flammability Index, 0.75mm	yes 700	°C °C	UL 94 IEC 60695-2-12
UL recognition Glow Wire Flammability Index, 0.75mm Glow Wire Flammability Index, 1.5mm Glow Wire Flammability Index, 3.0mm Glow Wire Ignition Temperature, 0.75mm	yes 700 700 775 725	°C °C °C	UL 94 IEC 60695-2-12 IEC 60695-2-12
UL recognition Glow Wire Flammability Index, 0.75mm Glow Wire Flammability Index, 1.5mm Glow Wire Flammability Index, 3.0mm Glow Wire Ignition Temperature, 0.75mm Glow Wire Ignition Temperature, 1.5mm	yes 700 700 775 725 725	°C °C °C °C	UL 94 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-13 IEC 60695-2-13
UL recognition Glow Wire Flammability Index, 0.75mm Glow Wire Flammability Index, 1.5mm Glow Wire Flammability Index, 3.0mm Glow Wire Ignition Temperature, 0.75mm	yes 700 700 775 725	°C °C °C °C	UL 94 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-13
UL recognition Glow Wire Flammability Index, 0.75mm Glow Wire Flammability Index, 1.5mm Glow Wire Flammability Index, 3.0mm Glow Wire Ignition Temperature, 0.75mm Glow Wire Ignition Temperature, 1.5mm Glow Wire Ignition Temperature, 3.0mm Glow Wire Temperature, No Flame, 0.75mm	yes 700 700 775 725 725 800 700	°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°	UL 94 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-13 IEC 60695-2-13 IEC 60695-2-13
UL recognition Glow Wire Flammability Index, 0.75mm Glow Wire Flammability Index, 1.5mm Glow Wire Flammability Index, 3.0mm Glow Wire Ignition Temperature, 0.75mm Glow Wire Ignition Temperature, 1.5mm Glow Wire Ignition Temperature, 3.0mm Glow Wire Temperature, No Flame, 0.75mm Glow Wire Temperature, No Flame, 1mm	yes 700 700 775 725 725 800 700	, , , , , , , , , ,	UL 94 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-13 IEC 60695-2-13 IEC 60695-2-13 IEC 60335-1 IEC 60335-1
UL recognition Glow Wire Flammability Index, 0.75mm Glow Wire Flammability Index, 1.5mm Glow Wire Flammability Index, 3.0mm Glow Wire Ignition Temperature, 0.75mm Glow Wire Ignition Temperature, 1.5mm Glow Wire Ignition Temperature, 3.0mm Glow Wire Temperature, No Flame, 0.75mm Glow Wire Temperature, No Flame, 1mm Glow Wire Temperature, No Flame, 1.5mm	yes 700 700 775 725 725 800 700 700	, , , , , , , , ,	UL 94 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-13 IEC 60695-2-13 IEC 60695-2-13 IEC 60335-1 IEC 60335-1 IEC 60335-1
UL recognition Glow Wire Flammability Index, 0.75mm Glow Wire Flammability Index, 1.5mm Glow Wire Flammability Index, 3.0mm Glow Wire Ignition Temperature, 0.75mm Glow Wire Ignition Temperature, 1.5mm Glow Wire Ignition Temperature, 3.0mm Glow Wire Temperature, No Flame, 0.75mm Glow Wire Temperature, No Flame, 1mm Glow Wire Temperature, No Flame, 1.5mm Glow Wire Temperature, No Flame, 2mm	yes 700 700 775 725 725 800 700 700 700	ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô	UL 94 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-13 IEC 60695-2-13 IEC 60695-2-13 IEC 60335-1 IEC 60335-1 IEC 60335-1 IEC 60335-1
UL recognition Glow Wire Flammability Index, 0.75mm Glow Wire Flammability Index, 1.5mm Glow Wire Flammability Index, 3.0mm Glow Wire Ignition Temperature, 0.75mm Glow Wire Ignition Temperature, 1.5mm Glow Wire Ignition Temperature, 3.0mm Glow Wire Temperature, No Flame, 0.75mm Glow Wire Temperature, No Flame, 1mm Glow Wire Temperature, No Flame, 1.5mm Glow Wire Temperature, No Flame, 2mm Glow Wire Temperature, No Flame, 3mm	yes 700 700 775 725 725 800 700 700 700 700	ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô	UL 94 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-13 IEC 60695-2-13 IEC 60695-2-13 IEC 60335-1 IEC 60335-1 IEC 60335-1 IEC 60335-1 IEC 60335-1
UL recognition Glow Wire Flammability Index, 0.75mm Glow Wire Flammability Index, 1.5mm Glow Wire Flammability Index, 3.0mm Glow Wire Ignition Temperature, 0.75mm Glow Wire Ignition Temperature, 1.5mm Glow Wire Ignition Temperature, 3.0mm Glow Wire Temperature, No Flame, 0.75mm Glow Wire Temperature, No Flame, 1mm Glow Wire Temperature, No Flame, 1.5mm Glow Wire Temperature, No Flame, 2mm	yes 700 700 775 725 725 800 700 700 700 700 8	ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô ô	UL 94 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-12 IEC 60695-2-13 IEC 60695-2-13 IEC 60695-2-13 IEC 60335-1 IEC 60335-1 IEC 60335-1 IEC 60335-1

Printed: 2025-05-30 Page: 2 of 12

Revised: 2025-04-17 Source: Celanese Materials Database





## THERMOPLASTIC POLYESTER RESIN

### **Electrical properties**

Surface resistivity	>1E15 Ohm	IEC 62631-3-2
Comparative tracking index	550	IEC 60112

## Physical/Other properties

Humidity absorption, 2mm	0.25 %	Sim. to ISO 62
Water absorption, 2mm	1 %	Sim. to ISO 62
Density	1420 kg/m <sup>3</sup>	ISO 1183
Density of melt	1270 kg/m³	

### Injection

Drying Recommended Drying Temperature Drying Time, Dehumidified Dryer Processing Moisture Content Melt Temperature Optimum Min. melt temperature Max. melt temperature Mold Temperature Optimum Min. mould temperature Max. mould temperature Hold pressure range	130 ≥60	h % °C °C °C °C °C MPa
Hold pressure time		s/mm
Back pressure	As low as possible	MPa
Ejection temperature	185	°C

#### Characteristics

Processing Injection Moulding

Delivery form Pellets

Additives Release agent Special characteristics Low Warpage

### **Automotive**

OEM STANDARD
Bosch N28 BN08-GF018

Printed: 2025-05-30 Page: 3 of 12

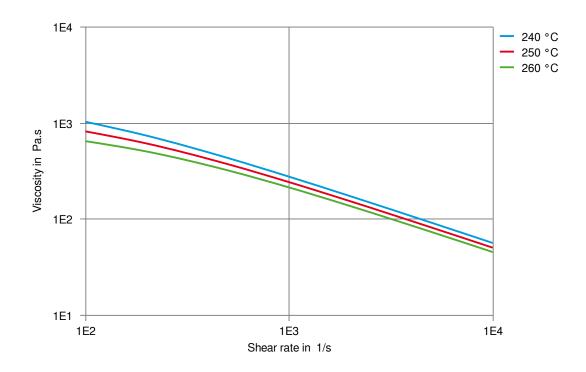
Revised: 2025-04-17 Source: Celanese Materials Database





## THERMOPLASTIC POLYESTER RESIN

Viscosity-shear rate



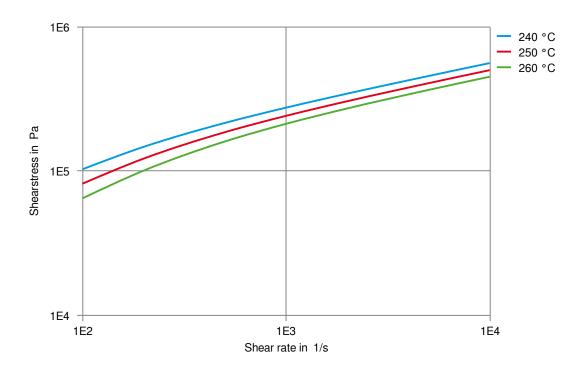
Printed: 2025-05-30 Page: 4 of 12





## THERMOPLASTIC POLYESTER RESIN

Shearstress-shear rate



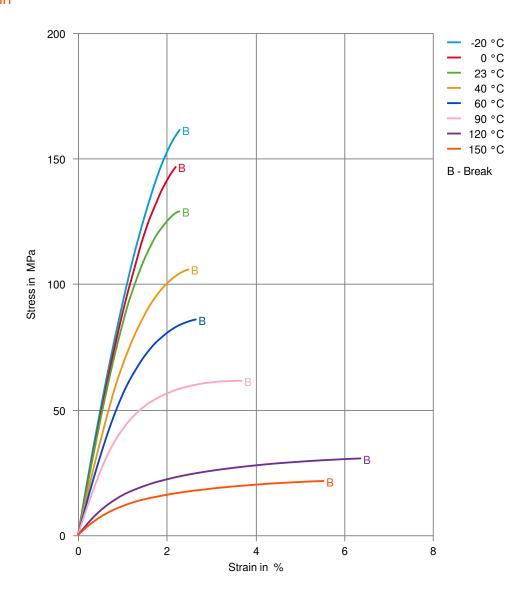
Printed: 2025-05-30 Page: 5 of 12





## THERMOPLASTIC POLYESTER RESIN

### Stress-strain



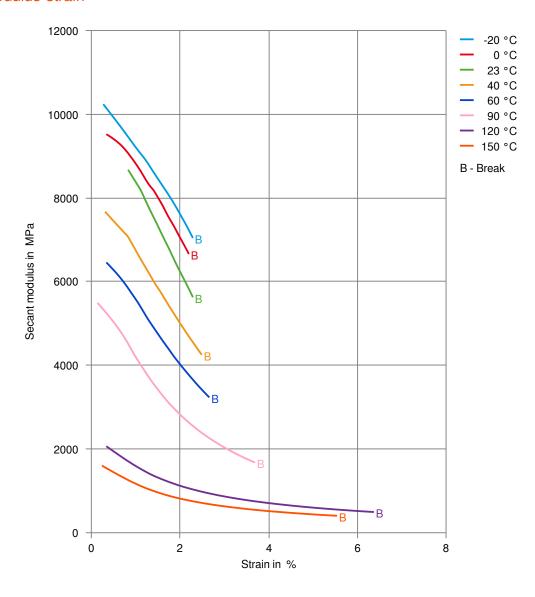
Printed: 2025-05-30 Page: 6 of 12





## THERMOPLASTIC POLYESTER RESIN

### Secant modulus-strain



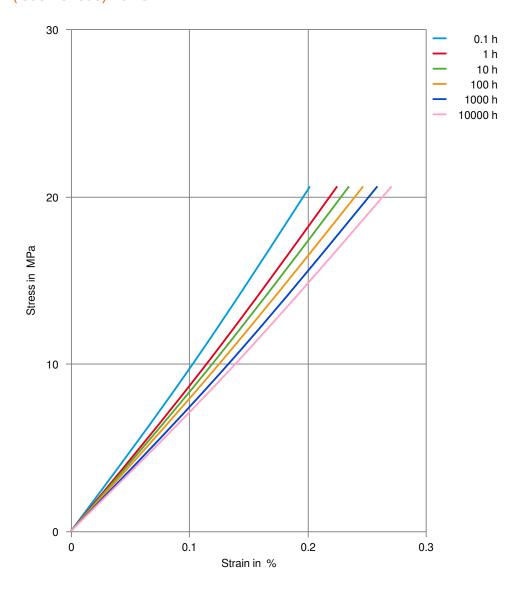
Printed: 2025-05-30 Page: 7 of 12





## THERMOPLASTIC POLYESTER RESIN

Stress-strain (isochronous) 23°C



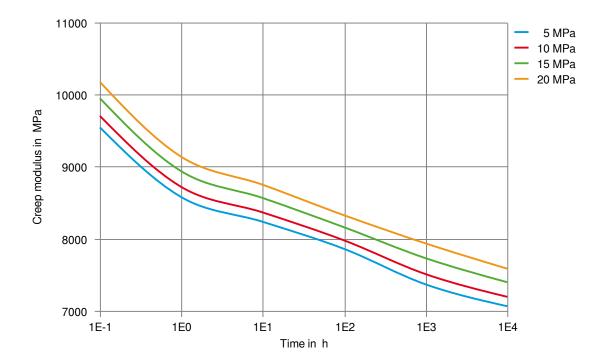
Printed: 2025-05-30 Page: 8 of 12





## THERMOPLASTIC POLYESTER RESIN

Creep modulus-time 23°C



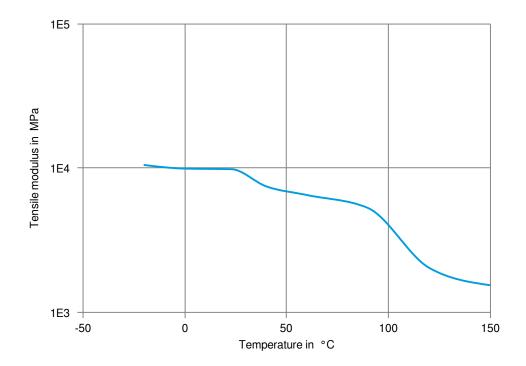
Printed: 2025-05-30 Page: 9 of 12





## THERMOPLASTIC POLYESTER RESIN

Tensile modulus-temperature



Printed: 2025-05-30 Page: 10 of 12

(+) 18816996168 Ponciplastics.com



## Crastin® LW9330 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
- X SAE 10W40 multigrade motor oil, 130°C
- X SAE 80/90 hypoid-gear oil, 130 °C
- ✓ Insulating Oil, 23°C

#### Standard Fuels

- X ISO 1817 Liquid 1 E5, 60°C
- ★ ISO 1817 Liquid 2 M15E4, 60°C
- X ISO 1817 Liquid 3 M3E7, 60°C
- X 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: 11 of 12





### 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: 12 of 12

Revised: 2025-04-17 Source: Celanese Materials Database

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, processing 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 e

© 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.