

MinIon[®] 73M30 NC010 MINERAL REINFORCED NYLON RESIN

Common features of Minlon® nylon resin include mechanical and physical properties such as high mechanical strength, excellent balance of stiffness /toughness, good high temperature performance, good chemical resistance, paintability, dimensional stability and low warpage. Grades with improved electrical and flammability properties are available within the Zytel® nylon resin product line. In addition, Minlon® nylon resin is available in different modified and reinforced grades to create a wide range of products with tailored properties for specific processes and end-uses.

The good melt stability of Minlon® nylon 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 (-31kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Minlon® nylon resin typically is used in demanding applications in the automotive, electrical, electronic, domestic appliances and construction industries.

Minlon® 73M30 NC010 is a 30% mineral reinforced, heat stabilised polyamide 6 resin for injection moulding. It has isotropic properties and low warpage.

Product information

Resin Identification Part Marking Code ISO designation	PA6-MD30 >PA6-MD30< ISO 16396-PA6,	ISO 1043 ISO 11469	
Rheological properties	dry/cond.		
Viscosity number	145/*	cm ³ /g	ISO 307, 1628
Moulding shrinkage, parallel	0.9/-	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.9/-	%	ISO 294-4, 2577
Typical mechanical properties	dry/cond.		
Tensile modulus	4800/1700	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	82/55	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	15/40	%	ISO 527-1/-2
Flexural modulus	4800/1800	MPa	ISO 178
Tensile creep modulus, 1h	*/1180	MPa	ISO 899-1
Tensile creep modulus, 1000h	*/740	MPa	ISO 899-1
Charpy impact strength, 23°C	110/N	kJ/m²	ISO 179/1eU
Charpy impact strength, -30 °C	85/85	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	5.5/11	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	3.5/3.5	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	5.5/9	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C	4.0/-	kJ/m²	ISO 180/1A
Poisson's ratio	0.36/0.42		
Thermal properties	dry/cond.		
Melting temperature, 10°C/min	221/*	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	70/-	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	80/*	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	195/*	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	210/*	°C	ISO 306

Printed: 2025-05-29



MINERAL REINFORCED NYLON RESIN

Coeff. of linear therm. expansion, par- Coefficient of linear thermal expansio		56/* 63/*	E-6/K E-6/K	ISO 11359-1/-2 ISO 11359-1/-2
(CLTE), parallel Coeff. of linear therm. expansion, par- Coeff. of linear therm. expansion, nor Coefficient of linear thermal expansio	mal, -40-23°C	89/* 57/* 65/*	E-6/K E-6/K E-6/K	ISO 11359-1/-2 ISO 11359-1/-2 ISO 11359-1/-2
normal Coeff. of linear therm. expansion, nor RTI, electrical, 0.75mm RTI, impact, 0.75mm RTI, strength, 0.75mm TGA curve	mal, 55-160°C	110/* 65 65 65 available	E-6/K °C °C °C	ISO 11359-1/-2 UL 746B UL 746B UL 746B ISO 11359-1/-2
Flammability		dry/cond.		
Burning Behav. at thickness h Thickness tested UL recognition FMVSS Class		HB/* 0.85/* yes/* SE	class mm	IEC 60695-11-10 IEC 60695-11-10 UL 94 ISO 3795 (FMVSS 302)
Physical/Other properties		dry/cond.		
Humidity absorption, 2mm Water absorption, 2mm Density		2.1/* 6.3/* 1350/-	% % kg/m³	Sim. to ISO 62 Sim. to ISO 62 ISO 1183
Injection				
Drying Recommended Drying Temperature Drying Time, Dehumidified Dryer Processing Moisture Content Melt Temperature Optimum Min. melt temperature Max. melt temperature Screw tangential speed Mold Temperature Optimum Min. mould temperature Max. mould temperature Hold pressure range Hold pressure time		2 - 4 ≤0.2 270 260 280 ≤0.2 100 70 120 50 - 100	° C h % ° C ° C ° C ° C ° C ° C ° C	
Characteristics				
Processing	Injection Moulding			
Delivery form	Pellets			

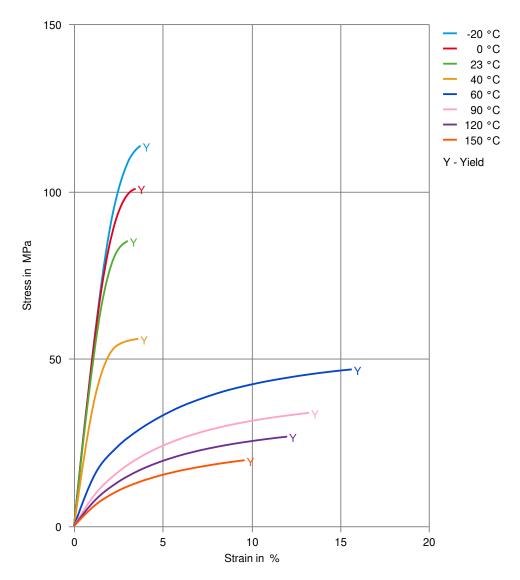
Printed: 2025-05-29





MINERAL REINFORCED NYLON RESIN

Stress-strain (dry)

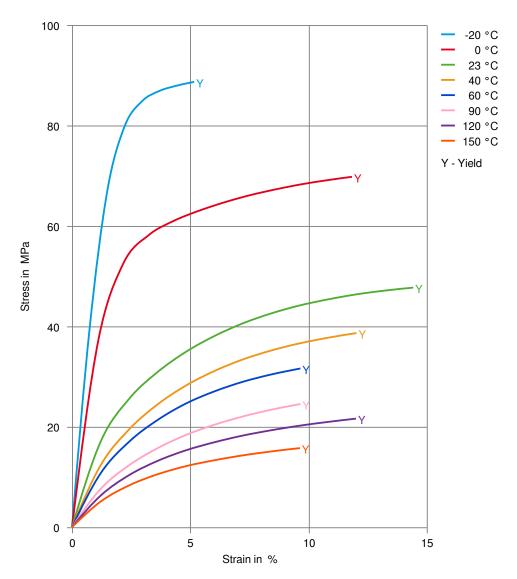






MINERAL REINFORCED NYLON RESIN

Stress-strain (cond.)

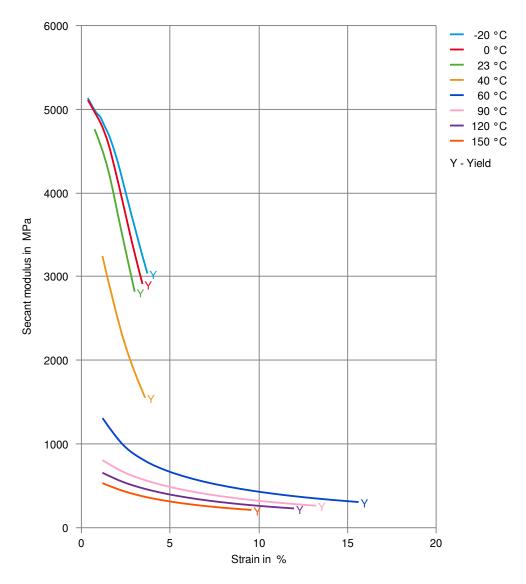






MINERAL REINFORCED NYLON RESIN

Secant modulus-strain (dry)

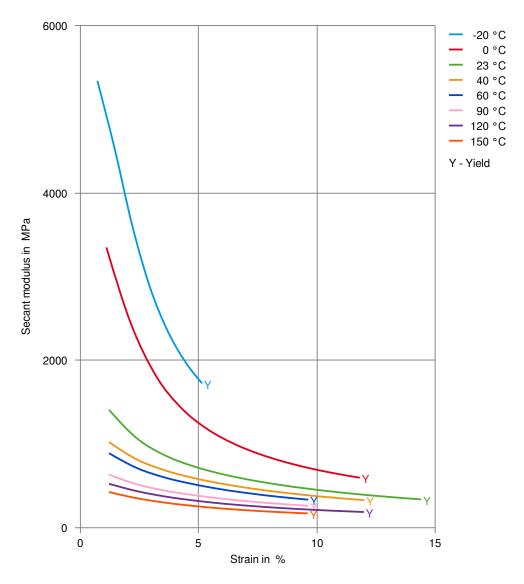






MINERAL REINFORCED NYLON RESIN

Secant modulus-strain (cond.)

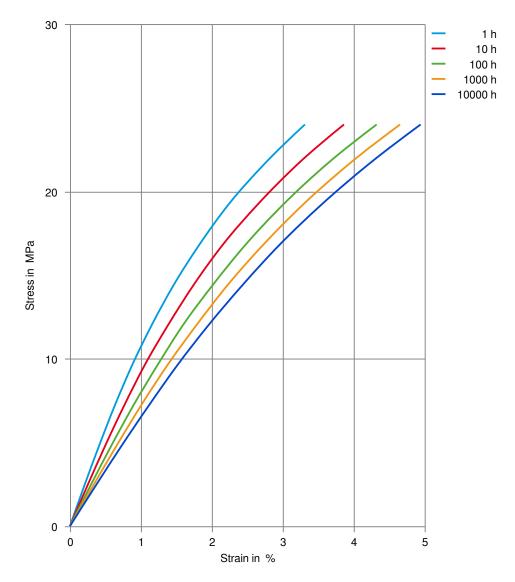






MINERAL REINFORCED NYLON RESIN

Stress-strain (isochronous) 23°C (cond.)

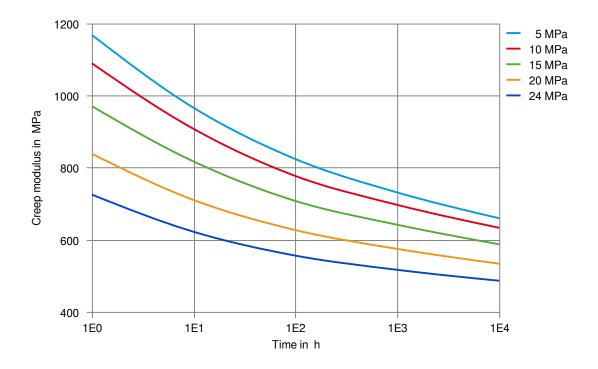






MINERAL REINFORCED NYLON RESIN

Creep modulus-time 23°C (cond.)

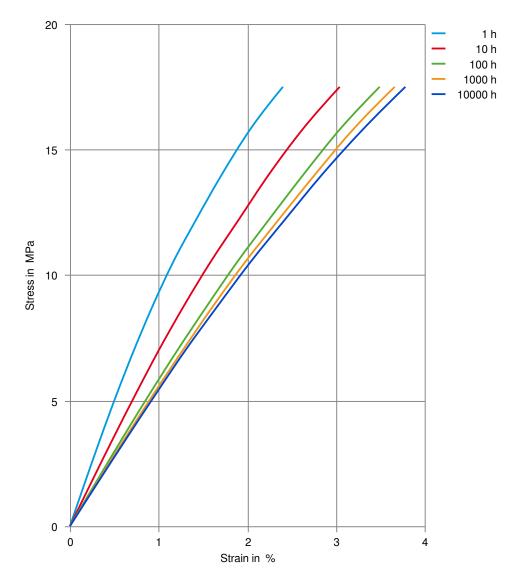






MINERAL REINFORCED NYLON RESIN

Stress-strain (isochronous) 60°C (cond.)

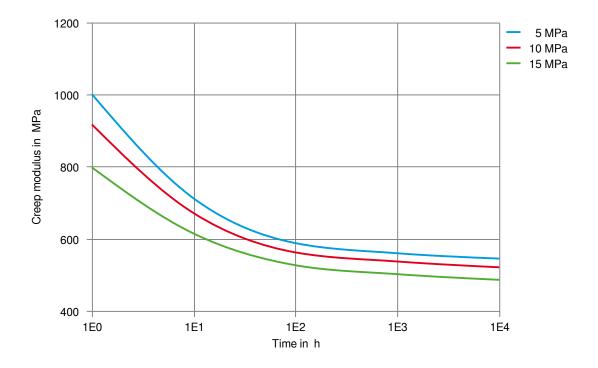






MINERAL REINFORCED NYLON RESIN

Creep modulus-time 60°C (cond.)

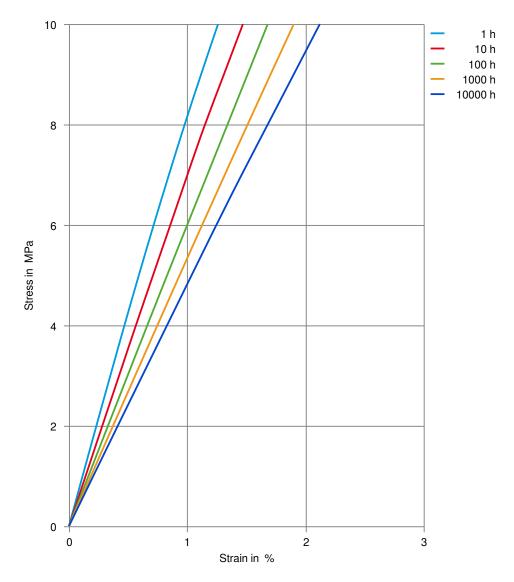






MINERAL REINFORCED NYLON RESIN

Stress-strain (isochronous) 90°C (cond.)

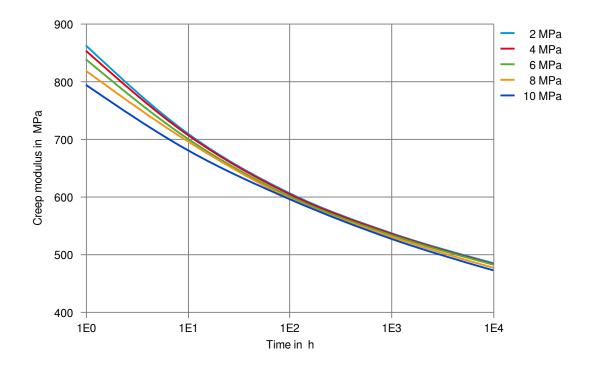






MINERAL REINFORCED NYLON RESIN

Creep modulus-time 90°C (cond.)

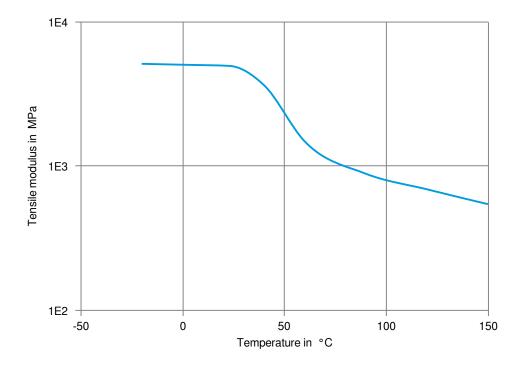






MINERAL REINFORCED NYLON RESIN

Tensile modulus-temperature (dry)

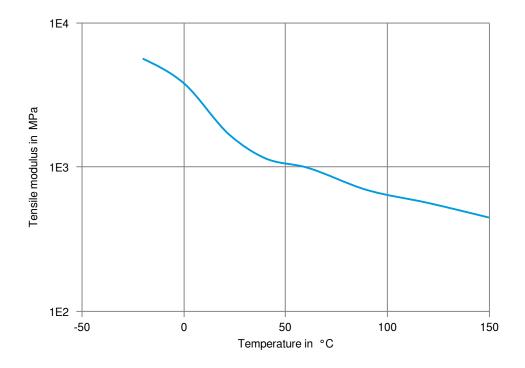






MINERAL REINFORCED NYLON RESIN

Tensile modulus-temperature (cond.)





MINERAL REINFORCED NYLON 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
- ★ 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

- ✗ 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
- ✓ 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: 2025-05-29

(+) **18816996168** Ponciplastics.com



Minlon[®] 73M30 NC010

MINERAL REINFORCED NYLON RESIN

- Sodium Carbonate solution (20% by mass), 23°C
- Sodium Carbonate solution (2% by mass), 23°C
- X Zinc Chloride solution (50% by mass), 23°C

Other

- Ethyl Acetate, 23°C
- X 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).

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: 2025-05-29

Page: 16 of 16

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 product 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 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 the lowest that texist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufact

© 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.