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Zytel® ST801A NC010A

NYLON RESIN

Zytel® ST801A NC010A is an Unreinforced, Super Toughened, partially UV stabilized, Polyamide 66

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	10	u	uCl		1011	Hat	1011

>PA66-HI<	:	ISO 1043 ISO 11469
	,	
	0.4	.==
	_	ISO 307, 1628
		ISO 294-4, 2577
1.4/-	%	ISO 294-4, 2577
dry/cond.		
2000/900	MPa	ISO 527-1/-2
49/44	MPa	ISO 527-1/-2
1800/700	MPa	ISO 178
*/800	MPa	ISO 899-1
*/700	MPa	ISO 899-1
-/N	kJ/m²	ISO 179/1eU
70/100 ^[P]	kJ/m²	ISO 179/1eA
20/20	kJ/m²	ISO 179/1eA
80/90	kJ/m²	ISO 180/1A
15.0/15.0	kJ/m²	ISO 180/1A
20.0/17.0	kJ/m²	ISO 180/1A
0.4/0.45		
dry/cond.		
	°C	ISO 11357-1/-3
	-	ISO 11357-1/-3
		ISO 75-1/-2
		ISO 75-1/-2
		ISO 306
		ISO 11359-1/-2
		ISO 11359-1/-2
,	_ •/	.55 11555 1, 2
140/-	E-6/K	ASTM E 831
		ISO 11359-1/-2
		ISO 11359-1/-2
		ISO 11359-1/-2
		ISO 11359-1/-2
130/-	E-6/K	ASTM E 831
		=
		UL 746B
		UL 746B
		UL 746B
/5	ν.	UL 746B
	>PA66-HI ISO 16396-PA66 dry/cond. 130/* 	130/* cm³/g 1.8/- % 1.4/- % dry/cond. 2000/900 MPa 49/44 MPa 1800/700 MPa */800 MPa */700 MPa -/N kJ/m² 70/100 ^[P] kJ/m² 20/20 kJ/m² 80/90 kJ/m² 15.0/15.0 kJ/m² 20.0/17.0 kJ/m² 0.4/0.45 dry/cond. 262/* °C 75/20 °C 63/* °C 157/* °C 205/* °C 110/* E-6/K 140/- E-6/K 140/- E-6/K 140/- E-6/K 110/* E-6/K 130/* E-6/K 130/* E-6/K 130/* E-6/K 130/* E-6/K 130/* E-6/K

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RTI, impact, 1.5mm RTI, impact, 3.0mm RTI, strength, 0.75mm RTI, strength, 1.5mm RTI, strength, 3.0mm	75 75 85 85 /* 85	°C °C °C °C °C	UL 746B UL 746B UL 746B UL 746B UL 746B
Flammability Burning Behav. at 1.5mm nom. thickn. Thickness tested UL recognition Burning Behav. at thickness h Thickness tested UL recognition Oxygen index FMVSS Class Burning rate, Thickness 1 mm Hot Wire Ignition, 1.5mm Hot Wire Ignition, 3mm	dry/cond. HB/* 1.5/* yes/* HB/* 0.81/* yes/* 20/* B <80 15/* 20/*	class mm class mm % mm/min s	IEC 60695-11-10 IEC 60695-11-10 UL 94 IEC 60695-11-10 IEC 60695-11-10 UL 94 ISO 4589-1/-2 ISO 3795 (FMVSS 302) ISO 3795 (FMVSS 302) UL 746A UL 746A
Electrical properties Relative permittivity, 100Hz Relative permittivity, 1MHz Dissipation factor, 100Hz Dissipation factor, 1MHz Volume resistivity Surface resistivity Electric strength Comparative tracking index Electric Strength, Short Time, 2mm High Amperage Arc Ignition Resistance, 1.5 mm High Amperage Arc Ignition Category, 1.5 mm [1]: >200	dry/cond. 3.5/5.9 3.3/3.5 50/1580 100/380 >1E13/8.7E10 */1E12 25/- 600/- 25/26 200 ^[1] /* 200 ^[1] /*	E-4 E-4 Ohm.m Ohm kV/mm kV/mm arcs class	IEC 62631-2-1 IEC 62631-2-1 IEC 62631-2-1 IEC 62631-2-1 IEC 62631-3-1 IEC 62631-3-2 IEC 60243-1 IEC 60112 IEC 60243-1 UL 746A UL 746A
Physical/Other properties Humidity absorption, 2mm Water absorption, 2mm Water absorption, Immersion 24h Density	dry/cond. 2/* 6.5/* 1.1/* 1070/-	% % % kg/m³	Sim. to ISO 62 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	yes 80 2 - 4 ≤0.2 290 280 300 ≤0.3	% °C °C	

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NYLON RESIN

Mold Temperature Optimum	80	°C
Min. mould temperature	50	°C
Max. mould temperature	100	°C
Hold pressure range	50 - 100	MPa
Hold pressure time	4	s/mm
Ejection temperature	190	°C

Extrusion

Drying Temperature	80	°C
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.06	%
Melt Temperature Optimum	280	°C
Melt Temperature Range	275 - 290	°C

Characteristics

Processing Injection Moulding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion,

Coatable, Casting

Delivery form Pellets

Additives Release agent

Special characteristics High impact or impact modified, U.V. stabilised or stable to weather

Automotive

OEM STANDARD ADDITIONAL INFORMATION

HyundaiMS211-46 Type C-2Mercedes-BenzDBL5404.00 PA6Mercedes-BenzDBL5410.01 PA66-I

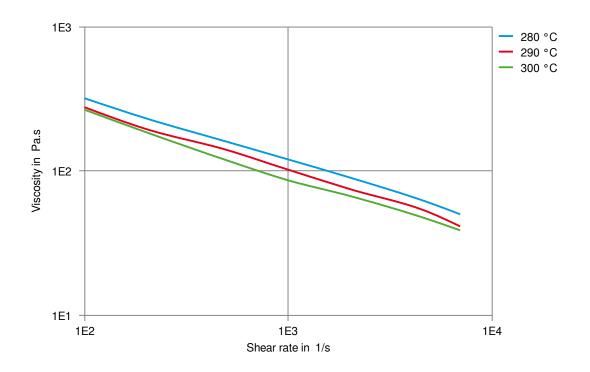
Stellantis - Chrysler MS.50017 / CPN-2959 Natural

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Viscosity-shear rate

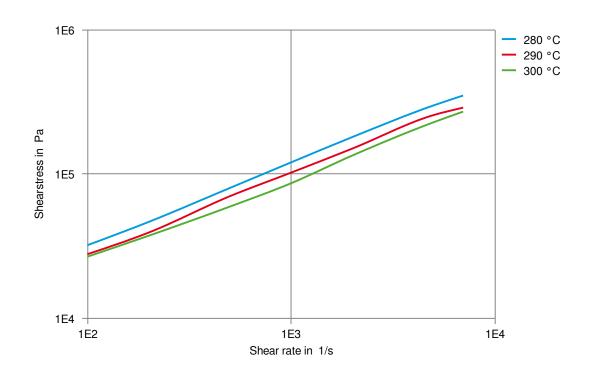


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Shearstress-shear rate



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Zytel® ST801A NC010A

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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

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- ✓ 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
- 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
- ✓ 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).

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Revised: 2025-04-23 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

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