

CAMPUS® Datasheet

Zytel® BM70G20HSLX BK537 - PA66-I-GF20
Celanese



Product Texts

Common features of Zytel® nylon resin include mechanical and physical properties such as high mechanical strength, excellent balance of stiffness and toughness, good high temperature performance, good electrical and flammability properties, good abrasion and chemical resistance. In addition, Zytel® nylon resins are available in different modified and reinforced grades to create a wide range of products with tailored properties for specific processes and end-uses. Zytel® nylon resin, including most flame retardant grades, offer the ability to be coloured.

The good melt stability of Zytel® 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.

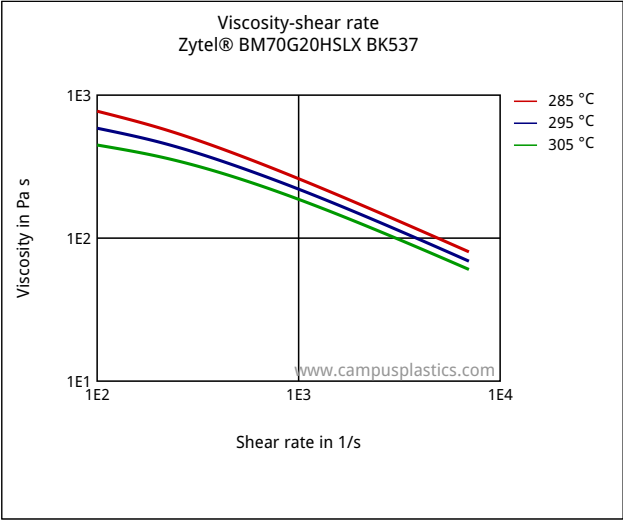
Zytel® nylon resin typically is used in demanding applications in the automotive, furniture, domestic appliances, sporting goods and construction industry.

Zytel® BM70G20HSLX BK537 is a 20% glass fiber reinforced polyamide 66 for blow molding.

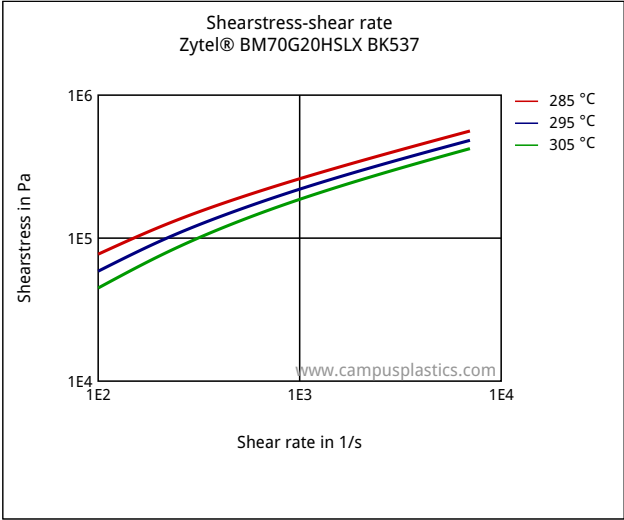
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.5 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile modulus	6500 / 4000	MPa	ISO 527-1/-2
Stress at break	120 / 75	MPa	ISO 527-1/-2
Strain at break	4 / 13	%	ISO 527-1/-2
Tensile creep modulus, 1h	* / 3900	MPa	ISO 899-1
Tensile creep modulus, 1000h	* / 3200	MPa	ISO 899-1
Charpy impact strength, +23°C	80 / 80	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	40 / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	15 / 16	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	8 / 6	kJ/m ²	ISO 179/1eA
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 10°C/min	260 / *	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	65 / *	°C	ISO 11357-1/-2
Temp. of deflection under load, 1.80 MPa	239 / *	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	257 / *	°C	ISO 75-1/-2
FMVSS	SE	-	ISO 3795 (FMVSS 302)
Other properties	dry / cond	Unit	Test Standard
Water absorption	5.2 / *	%	Sim. to ISO 62
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1250 / -	kg/m ³	ISO 1183
Material specific properties	dry / cond	Unit	Test Standard
Viscosity number	155 / *	cm ³ /g	ISO 307, 1157, 1628
Rheological calculation properties	Value	Unit	Test Standard
Density of melt	1070	kg/m ³	-
Thermal conductivity of melt	0.2	W/(m K)	-
Spec. heat capacity melt	2000	J/(kg K)	-
Ejection temperature	206	°C	-

Diagrams

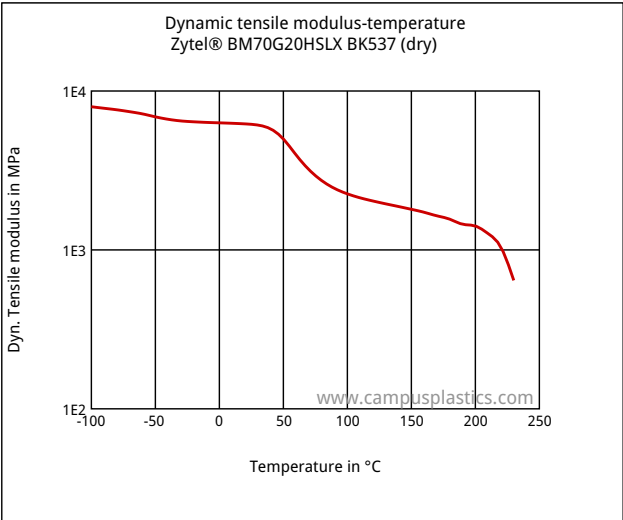
Viscosity-shear rate



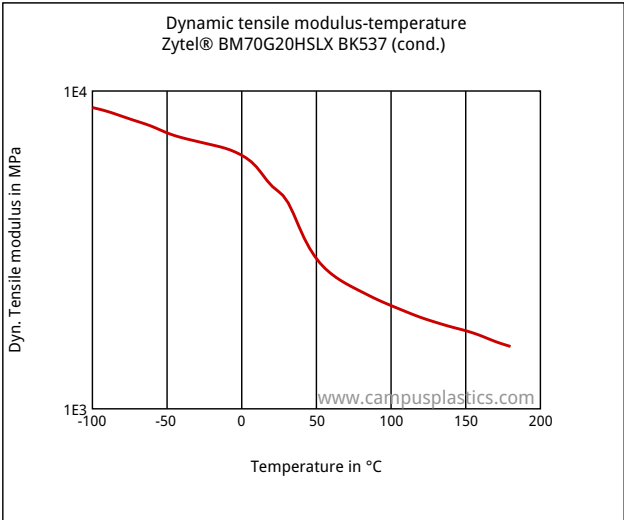
Shearstress-shear rate



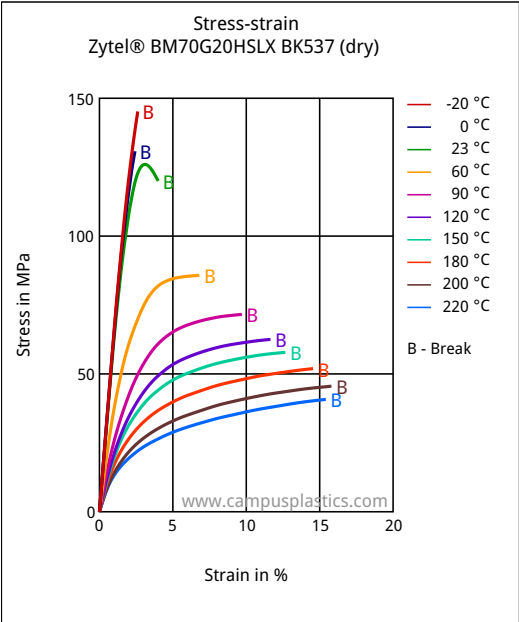
Dynamic tensile modulus-temperature



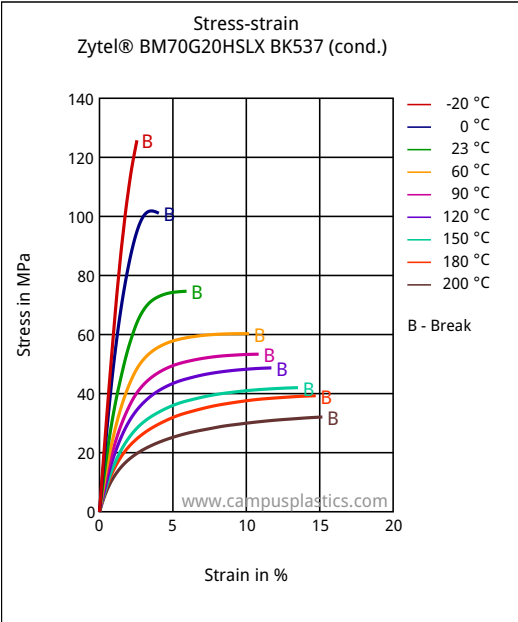
Dynamic tensile modulus-temperature



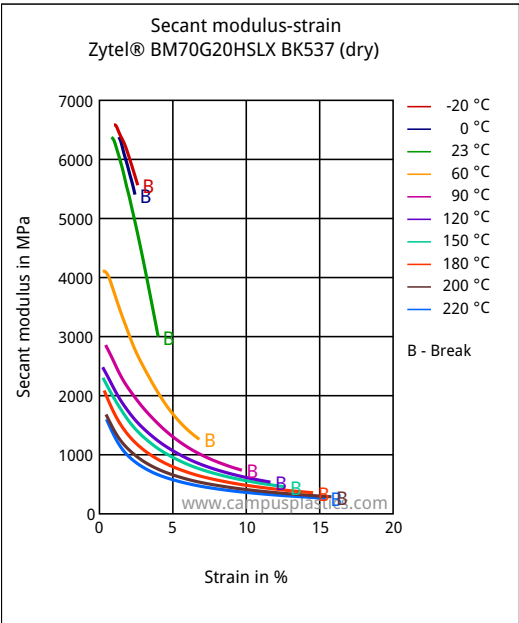
Stress-strain



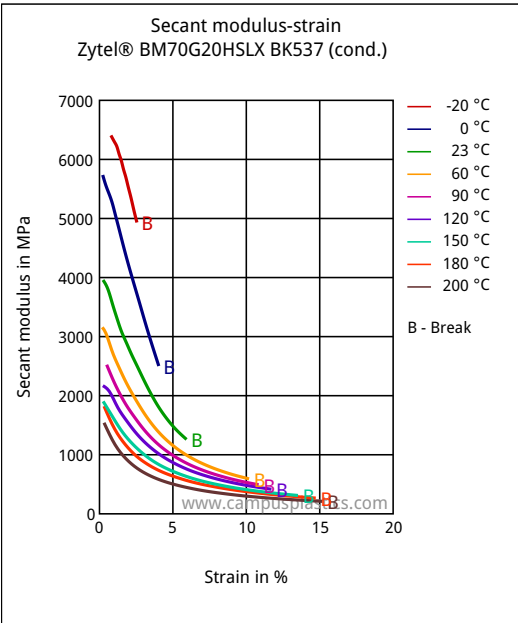
Stress-strain



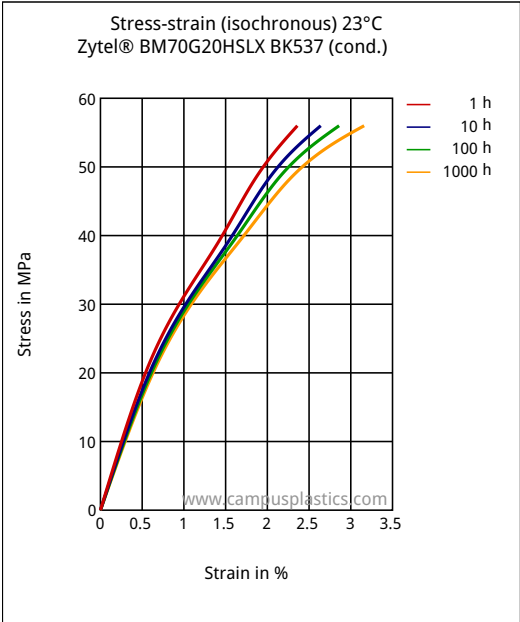
Secant modulus-strain



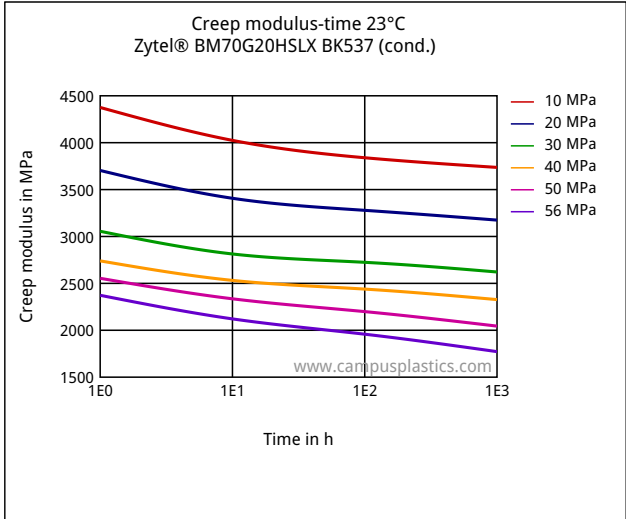
Secant modulus-strain



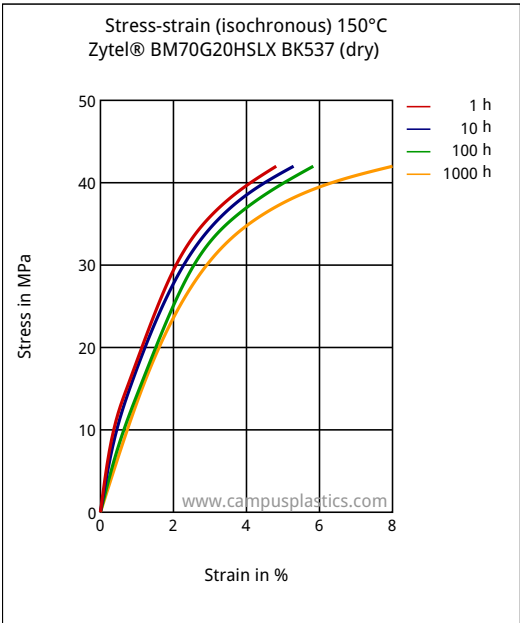
Stress-strain (isochronous) 23°C



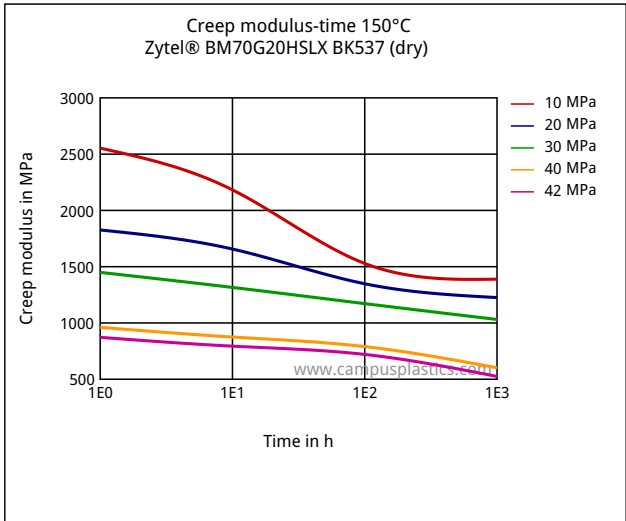
Creep modulus-time 23°C



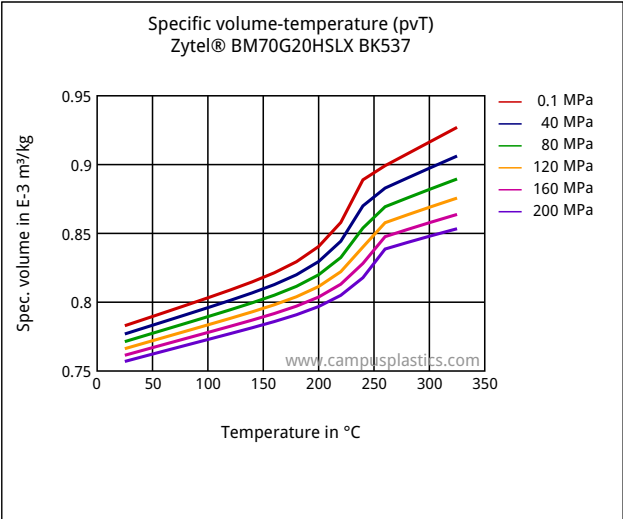
Stress-strain (isochronous) 150°C



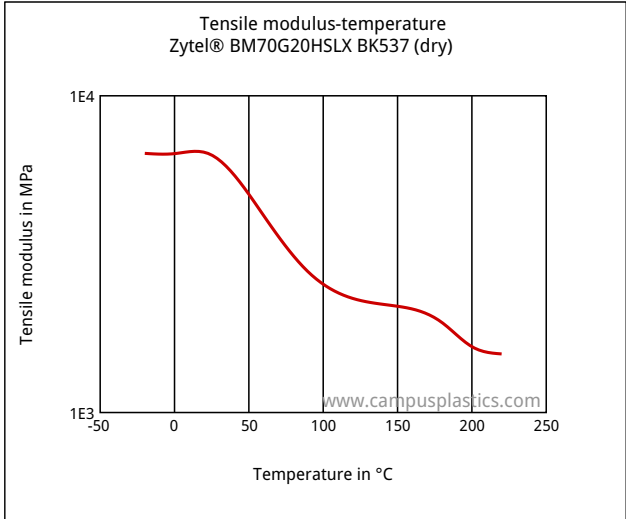
Creep modulus-time 150°C



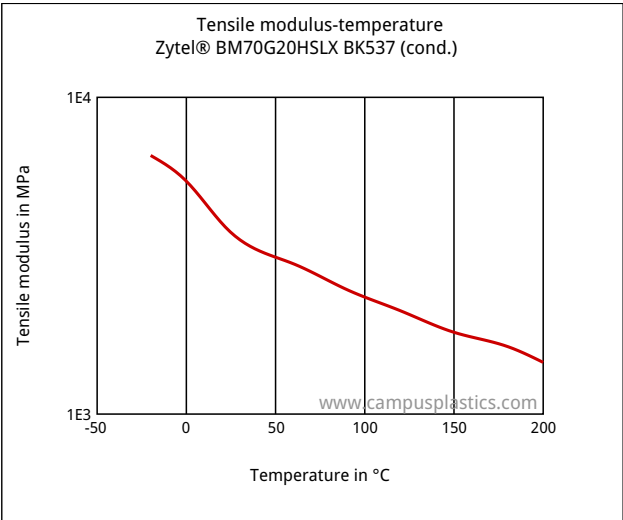
Specific volume-temperature (pvT)



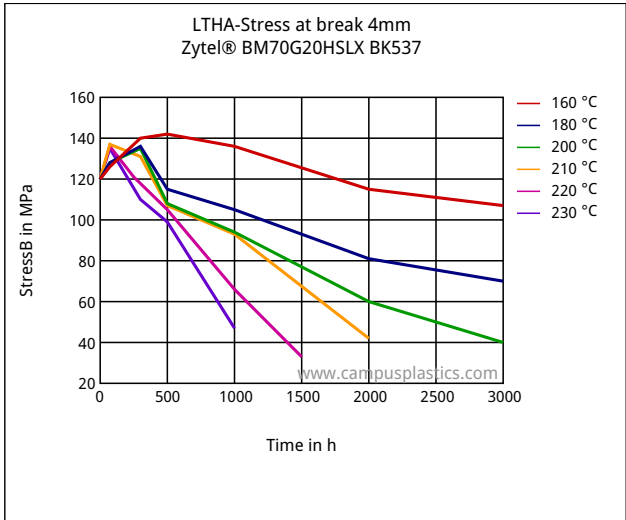
Tensile modulus-temperature



Tensile modulus-temperature

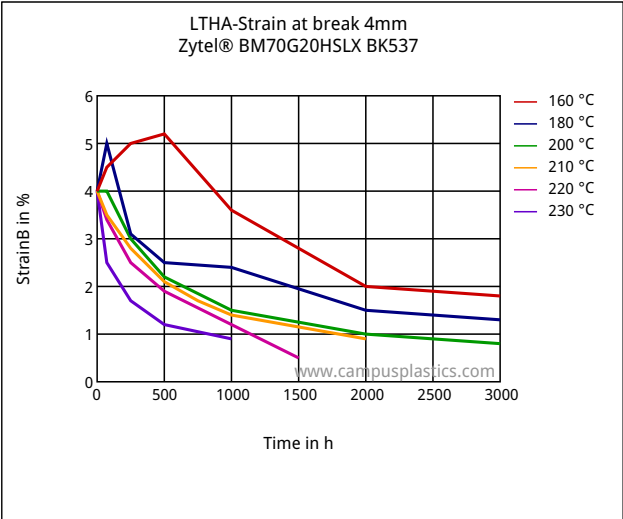


LTHA-Stress at break 4mm



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LTHA-Strain at break 4mm



Characteristics

Processing

Injection Molding, Blow Molding

Delivery form

Pellets

Special Characteristics

Heat stabilized or stable to heat

Regional Availability

North America, Europe, Asia Pacific, South and Central America

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)

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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 (60°C)
- ☹️ ISO 1817 Liquid 2 (60°C)
- ☹️ ISO 1817 Liquid 3 (60°C)
- ☹️ ISO 1817 Liquid 4 (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)
- ☹️ 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)
- ☹️ Deionized water (90°C)
- 🚫 Phenol solution (5% by mass) (23°C)

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. Colorants or other additives may cause significant variations in data values. Properties of molded 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

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