

CAMPUS® Datasheet

Zytel® BM70G20HSLX BK537 - PA66-I-GF20

DuPont Engineering Polymers



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, DuPont recommends, 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.

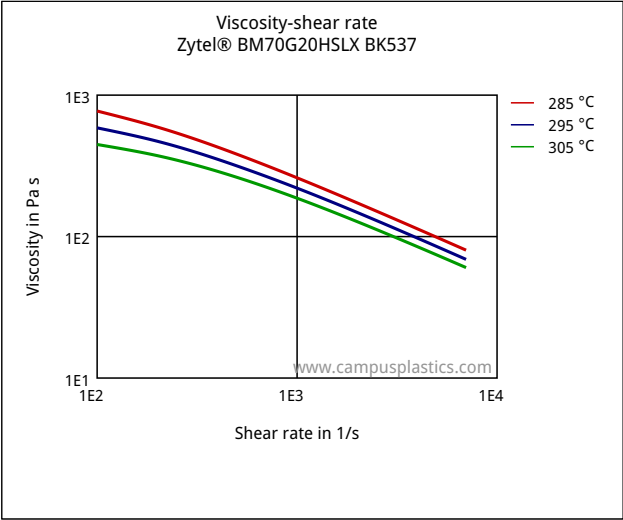
Zytel® nylon resin typically is used in demanding applications in the automotive, furniture, domestic appliances, sporting goods and construction industry.

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

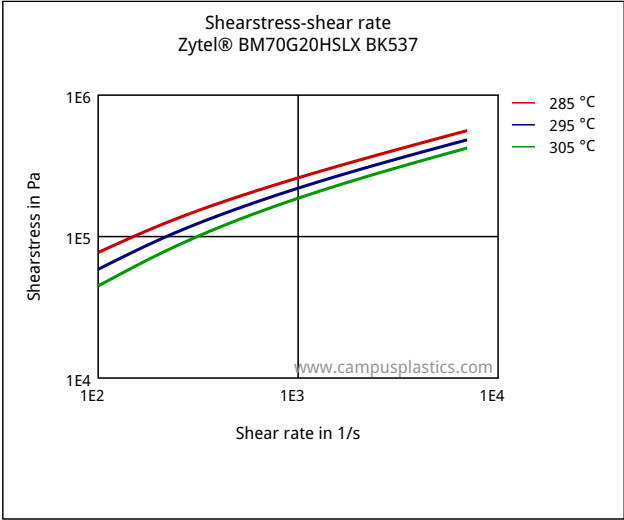
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.5 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile modulus	6500 / 4000	MPa	ISO 527-1/-2
Stress at break	120 / 75	MPa	ISO 527-1/-2
Strain 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	60 / *	°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	210	°C	-

Diagrams

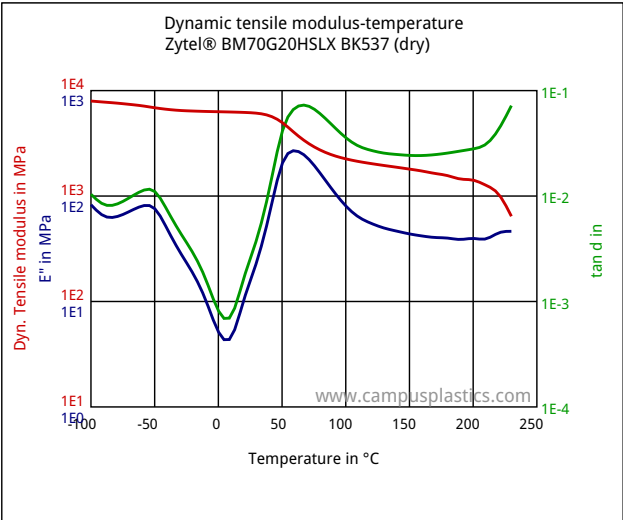
Viscosity-shear rate



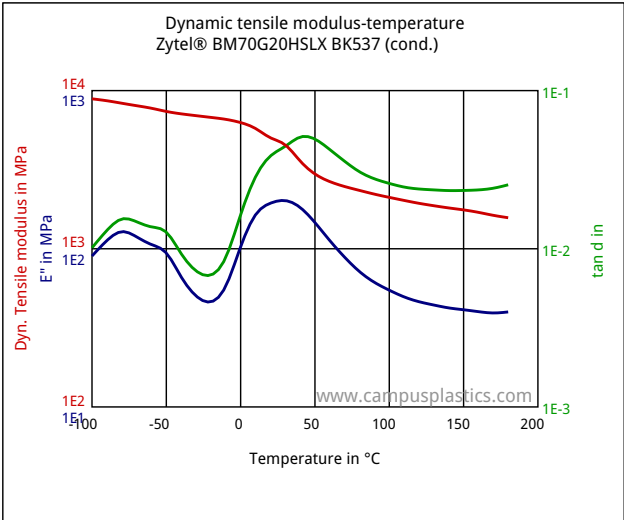
Shearstress-shear rate



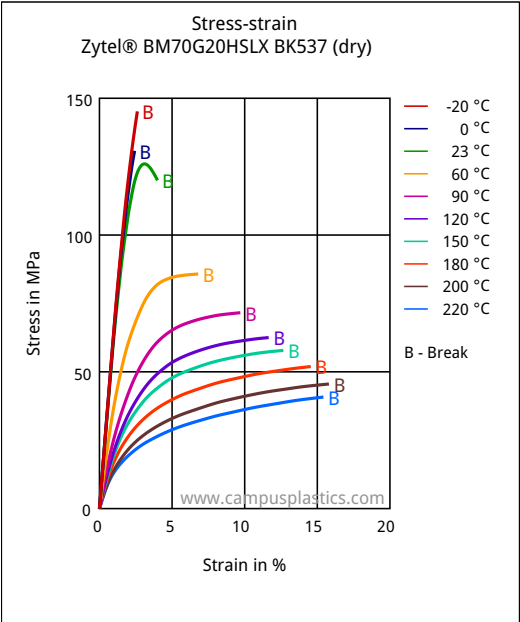
Dynamic tensile modulus-temperature



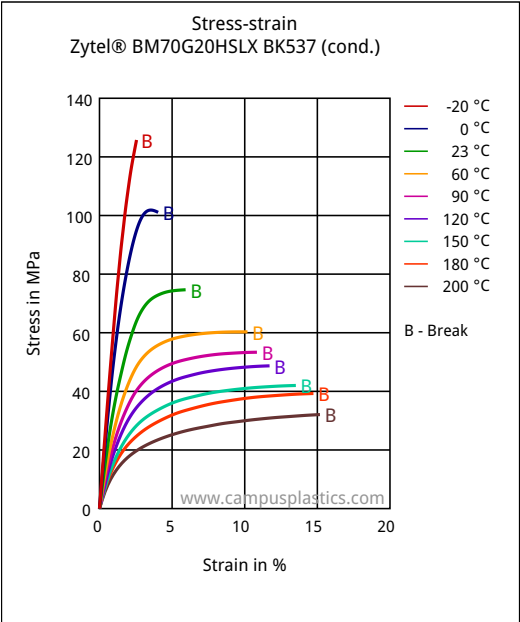
Dynamic tensile modulus-temperature



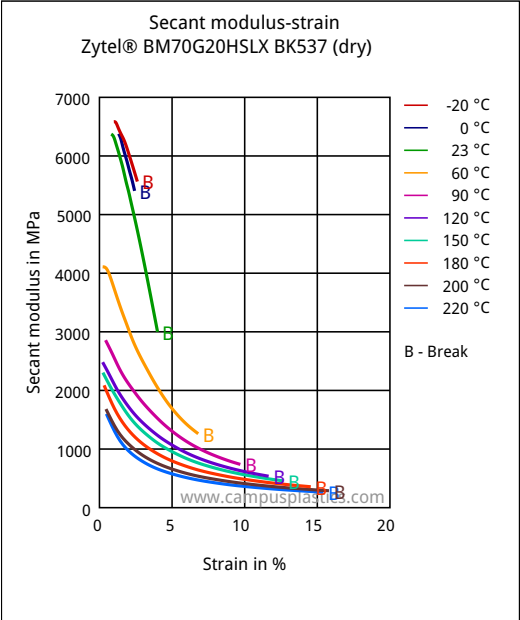
Stress-strain



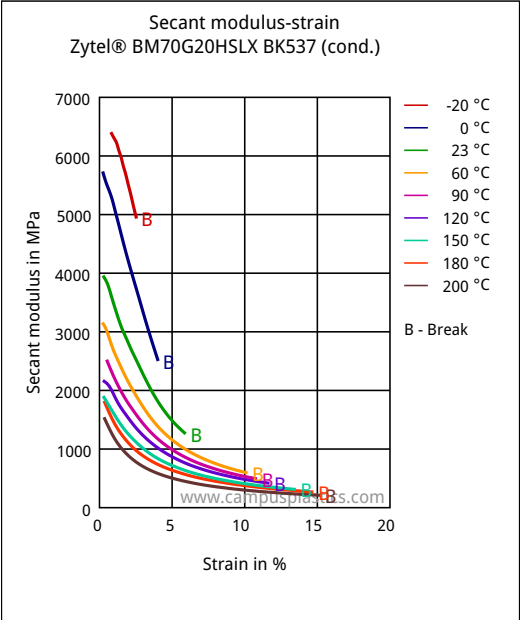
Stress-strain



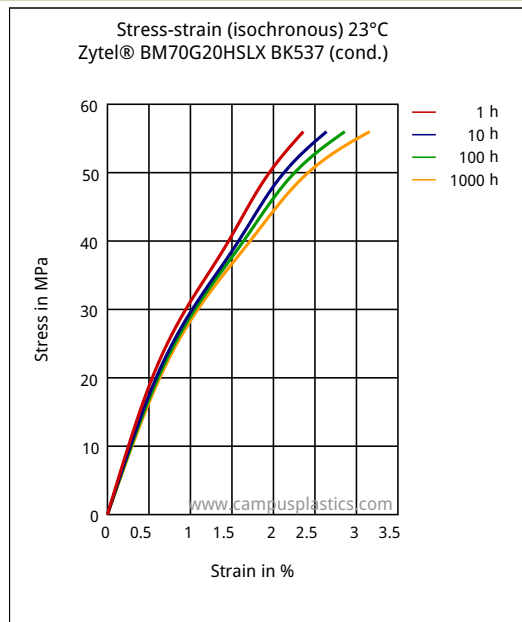
Secant modulus-strain



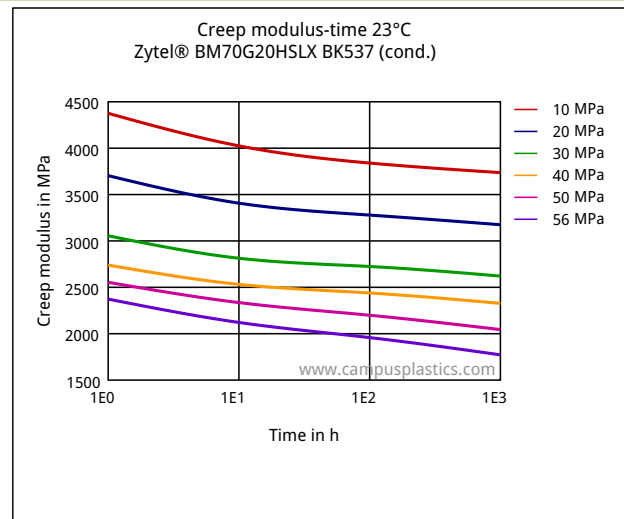
Secant modulus-strain



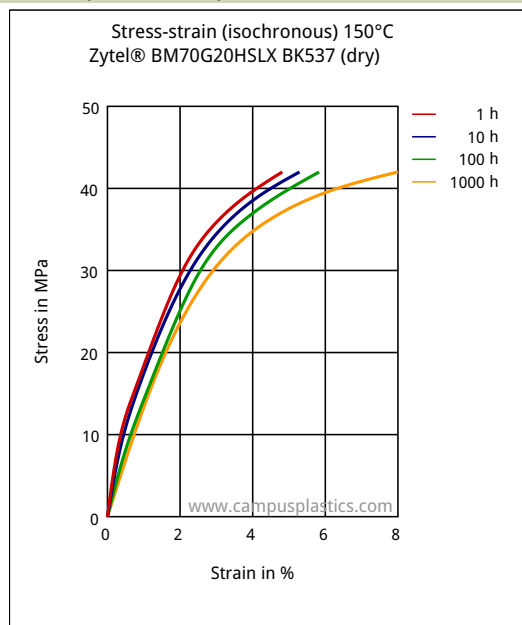
Stress-strain (isochronous) 23°C



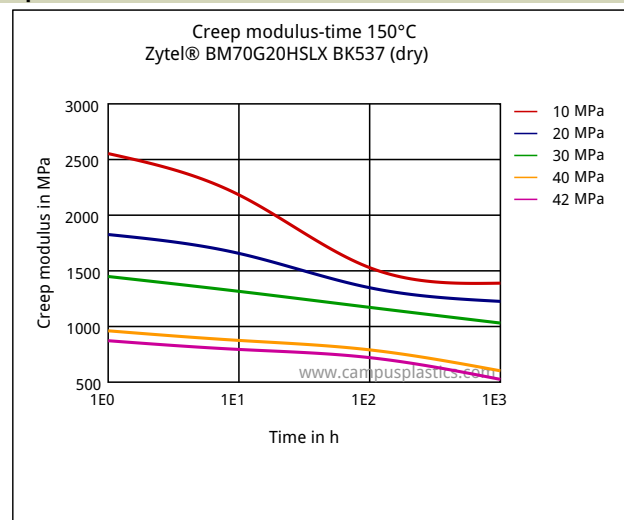
Creep modulus-time 23°C



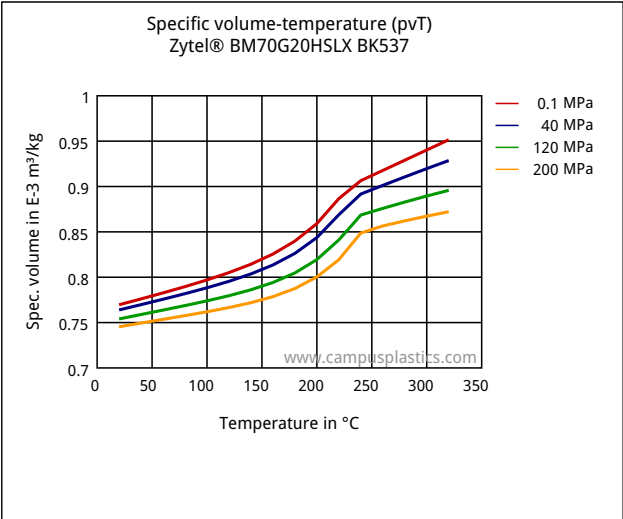
Stress-strain (isochronous) 150°C



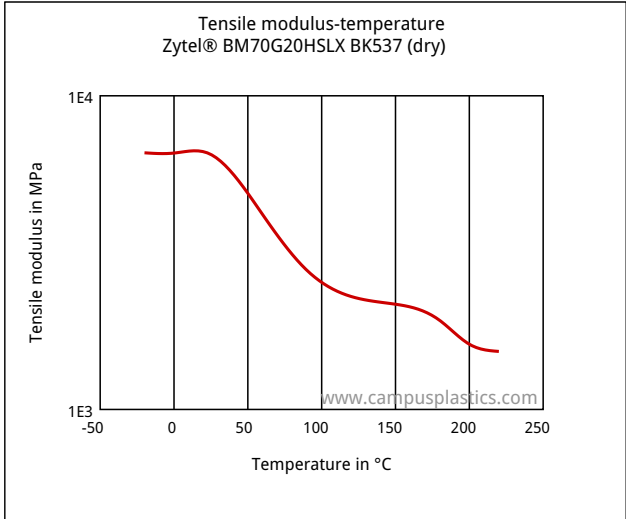
Creep modulus-time 150°C



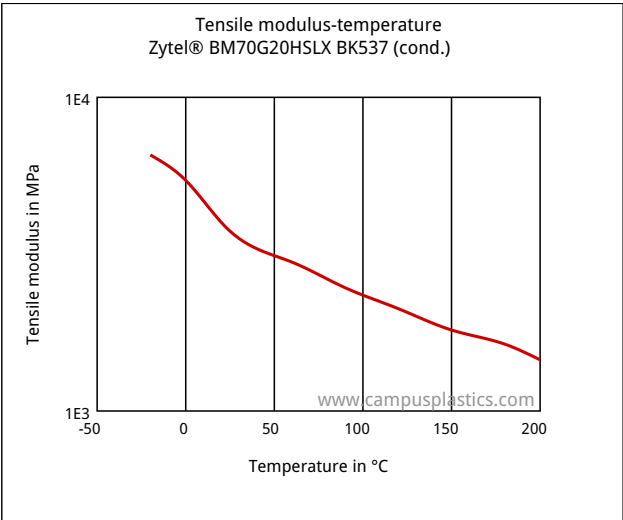
Specific volume-temperature (pvT)



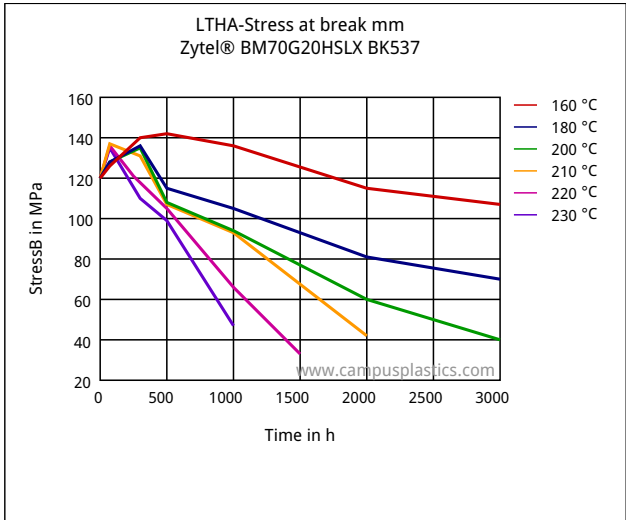
Tensile modulus-temperature



Tensile modulus-temperature

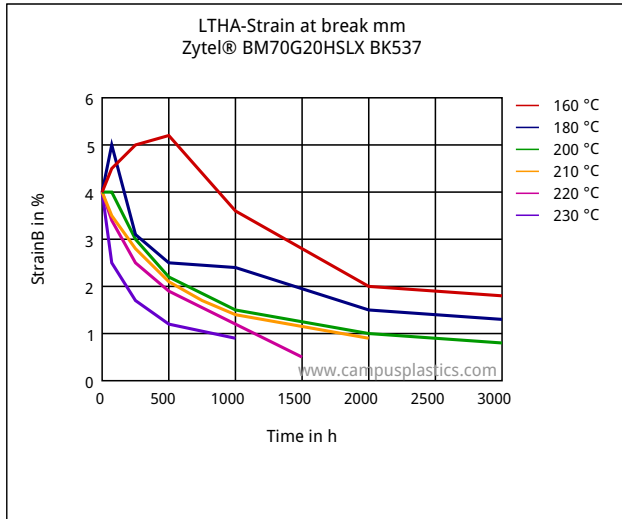


LTHA-Stress at break mm



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LTHA-Strain at break mm



Characteristics

Processing

Injection Molding, Blow Molding

Delivery form

Pellets

Special Characteristics

Heat stabilized or stable to heat

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)

All data provided according to ISO 10350 for single points and ISO 11403 for multipoints.

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.

Test temperatures are 23°C unless otherwise stated.

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This information may be subject to revision as new knowledge and experience becomes available.

The information set forth herein is furnished free of charge and is based on technical data that DuPont believes to be reliable and falls

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