



Zytel® 444AHS BK152

NYLON RESIN

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® 444AHS is a toughened, heat stabilised, black polyamide 66 resin for injection moulding. It is a high flow, processing friendly material.

Product information

Resin Identification	PA66-I	ISO 1043
Part Marking Code	>PA66-I<	ISO 11469
ISO designation	ISO 16396-PA66-I,,M1CG1H,S14-020	

Rheological properties

	dry/cond.		
Moulding shrinkage, parallel	1.4/-	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.2/-	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile Modulus	2400/1100	MPa	ISO 527-1/-2
Yield stress	62/40	MPa	ISO 527-1/-2
Yield strain	5.5/15	%	ISO 527-1/-2
Nominal strain at break	25/>50	%	ISO 527-1/-2
Flexural Modulus	2270/-	MPa	ISO 178
Izod notched impact strength, 23°C	16/-	kJ/m ²	ISO 180/1A
Izod notched impact strength, -40°C	10/-	kJ/m ²	ISO 180/1A
Poisson's ratio	0.38/0.45	-	

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	260/*	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	65/*	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	90/*	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	100/*	E-6/K	ISO 11359-1/-2



Zytel® 444AHS BK152

NYLON RESIN

Flammability

FMVSS Class	B -	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80 mm/min	ISO 3795 (FMVSS 302)

Other properties

Other properties		dry/cond.	
Water absorption, 2mm	1.3/*	%	Sim. to ISO 62
Water absorption, Immersion 24h	1.3/*	%	Sim. to ISO 62
Density	1110/-	kg/m³	ISO 1183

Injection

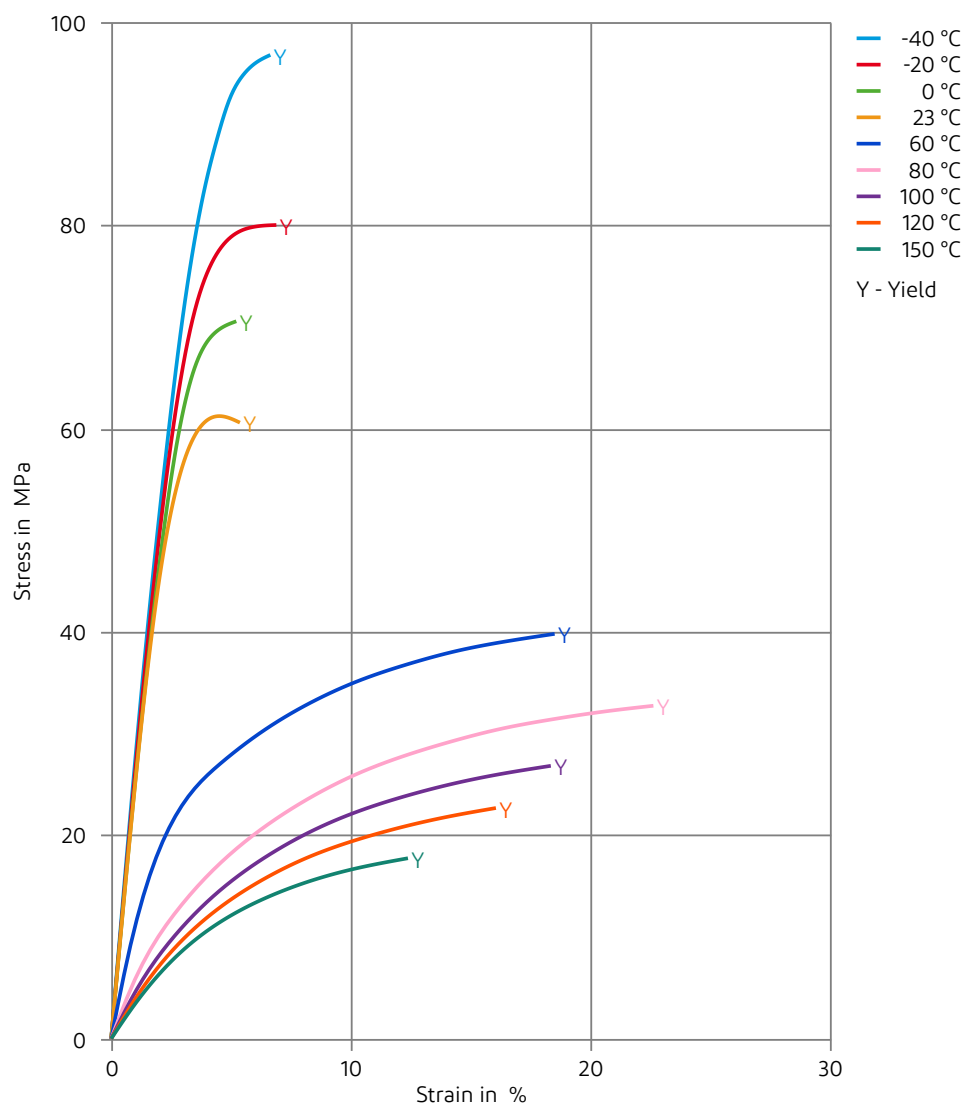
Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.2 %
Melt Temperature Optimum	290 °C
Min. melt temperature	280 °C
Max. melt temperature	300 °C
Max. screw tangential speed	0.3 m/s
Mold Temperature Optimum	70 °C
Min. mould temperature	50 °C
Max. mould temperature	90 °C
Hold pressure range	50 - 100 MPa
Hold pressure time	4 s/mm
Ejection temperature	190 °C



Zytel® 444AHS BK152

NYLON RESIN

Stress-strain (dry)

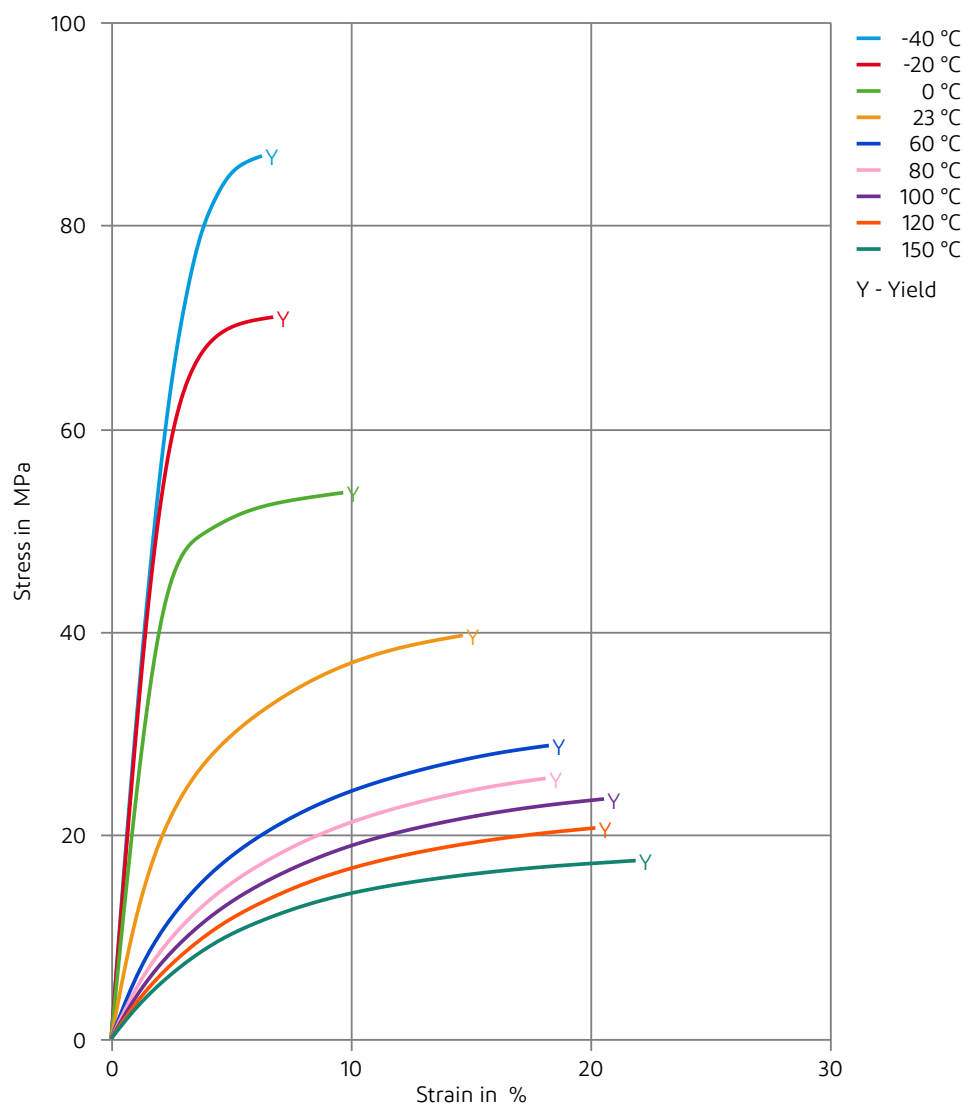




Zytel® 444AHS BK152

NYLON RESIN

Stress-strain (cond.)

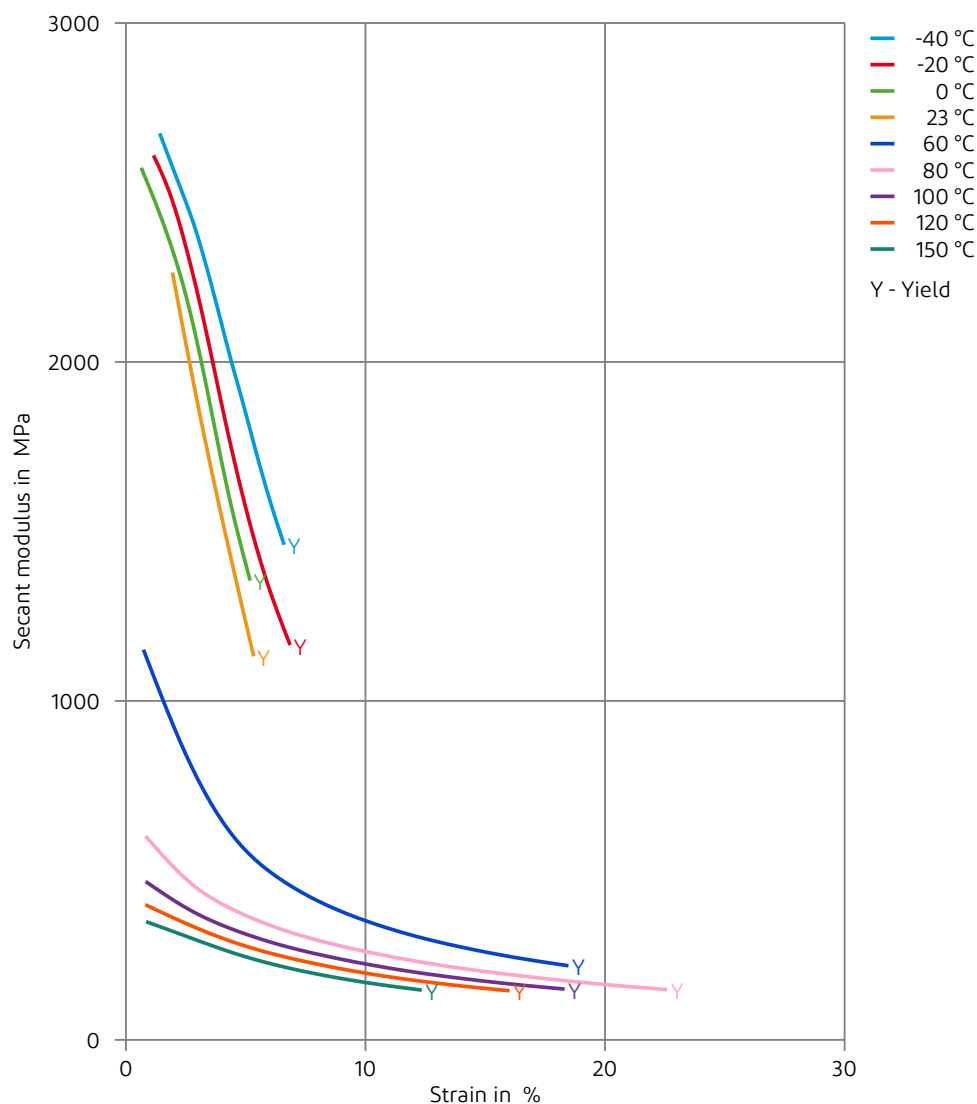




Zytel® 444AHS BK152

NYLON RESIN

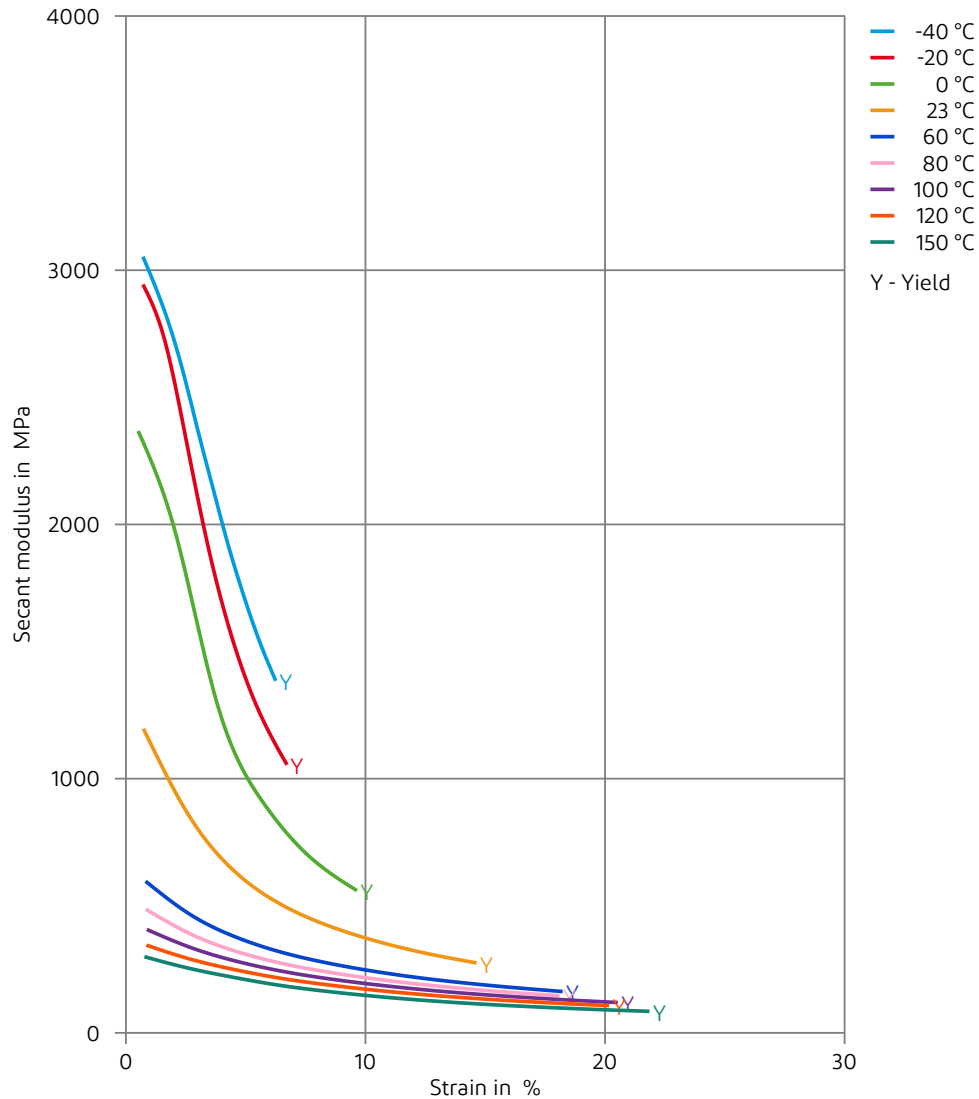
Secant modulus-strain (dry)



Zytel® 444AHS BK152

NYLON RESIN

Secant modulus-strain (cond.)

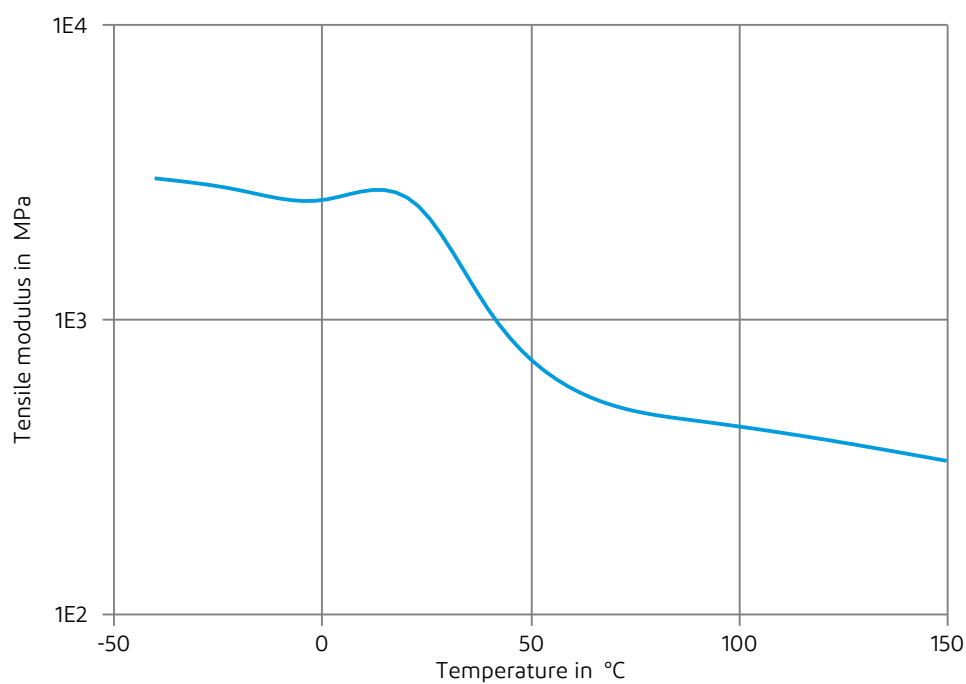




Zytel® 444AHS BK152

NYLON RESIN

Tensile modulus-temperature (dry)

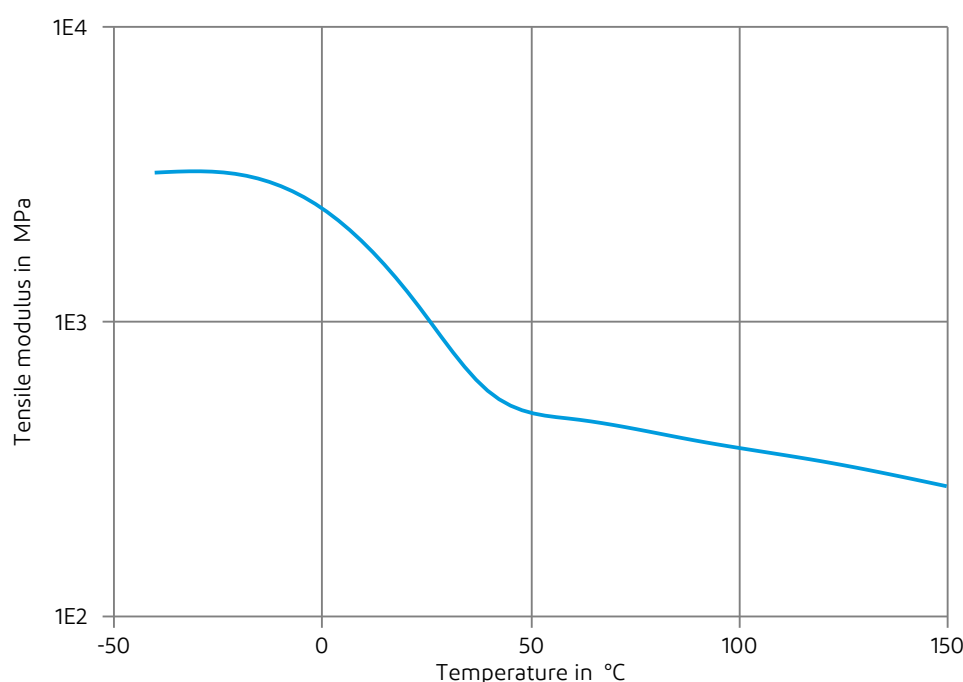




Zytel® 444AHS BK152

NYLON RESIN

Tensile modulus-temperature (cond.)



Revised: 2019-07-18

Page: 8 of 8

dupont.com

The information set forth herein is furnished free of charge, is based on technical data that DuPont believes to be reliable, and represents typical values that fall within the normal range of properties. This information relates only to the specific material designated and may not be valid for such material used in combination with other materials or in other processes. It is intended for use by persons having technical skill, at their own discretion and risk. This information should not be used to establish specification limits nor used alone as the basis of design. Handling precaution information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards and comply with applicable law. Since conditions of product use and disposal are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any product, evaluation under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate or a recommendation to infringe on patents.

CAUTION: Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract or other acknowledgement that is consistent with the DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative.

DuPont's sole warranty is that our products will meet our standard sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DUPONT SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR NON-INFRINGEMENT. DUPONT DISCLAIMS LIABILITY FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, SM or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted.

© 2022 DuPont. All rights reserved.