

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® EFE7374 is a 40% fibre reinforced, heat stabilised, lubricated, toughened polyamide 6 for injection moulding. It has an improved impact resistance and excellent surface appearance and gloss.

### Product information

Resin Identification Part Marking Code ISO designation	PA6-IGF40 >PA6-IGF40< ISO 16396-PA6-I,GF40,M1CGH,S10-120		ISO 1043 ISO 11469
Rheological properties	dry/cond.		
Viscosity number	110/*	cm <sup>3</sup> /g	ISO 307, 1628
Moulding shrinkage, parallel	0.2/-	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.6/-	%	ISO 294-4, 2577
Typical mechanical properties	dry/cond.		
Tensile modulus	12000/7500	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	190/130	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3.5/7.5	%	ISO 527-1/-2
Charpy impact strength, 23°C	110/113	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	118/105	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	24/33	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	17/18	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	24/30	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C	19.0/18.0	kJ/m²	ISO 180/1A
Poisson's ratio	0.33/0.34		
Thermal properties	dry/cond.		
Melting temperature, 10°C/min	221/*	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	212/*	°C	ISO 75-1/-2



### Flammability

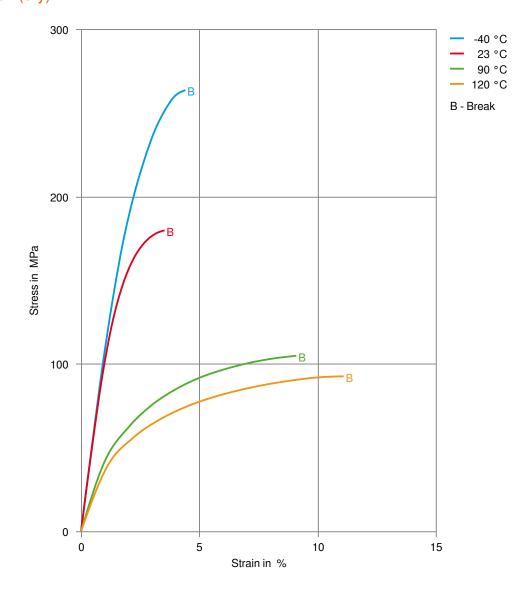
FMVSS Class Burning rate, Thickness 1 mm	B 33	mm/min	ISO 3795 (FMVSS 302) ISO 3795 (FMVSS 302)	
Physical/Other properties	dry/cond.			
Humidity absorption, 2mm Water absorption, 2mm Density	1.7/* 5.4/* 1410/-	% % kg/m³	Sim. to ISO 62 Sim. to ISO 62 ISO 1183	
Injection				
Drying Recommended Drying Temperature 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 m/s °C °C °C		
Characteristics				
Processing	Injection Moulding			
Delivery form	Pellets			
Special characteristics	Heat stabilised or stable to heat			
Automotive				

OEM General Motors STANDARD GMW17385P-PA6-GF40





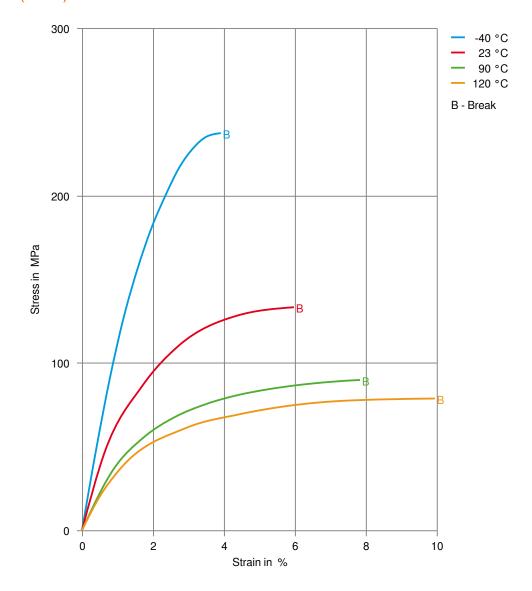
Stress-strain (dry)







Stress-strain (cond.)

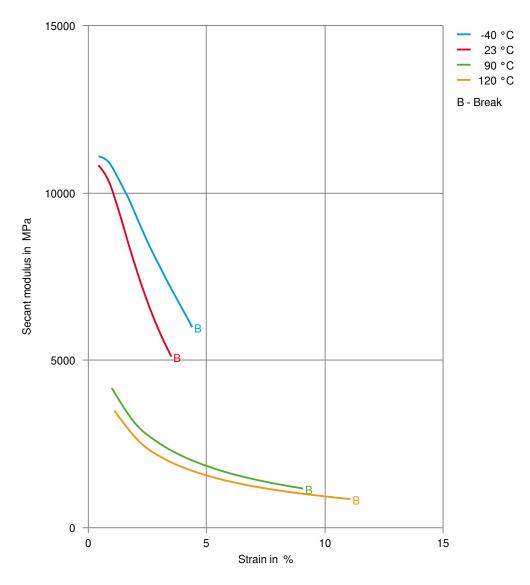






### NYLON RESIN

### Secant modulus-strain (dry)

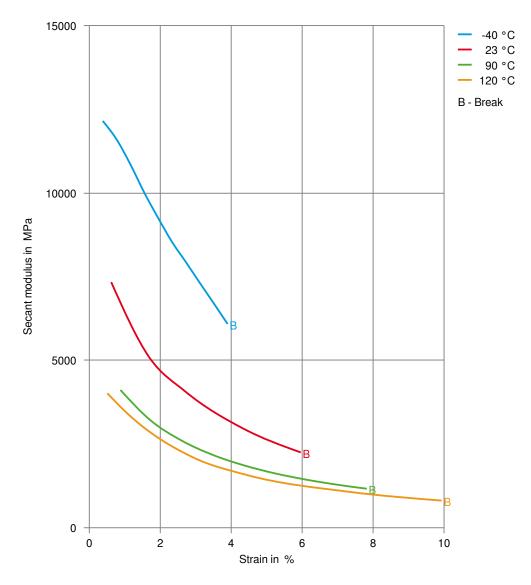






## NYLON RESIN

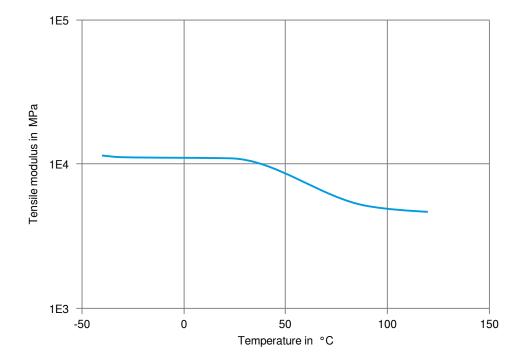
### Secant modulus-strain (cond.)







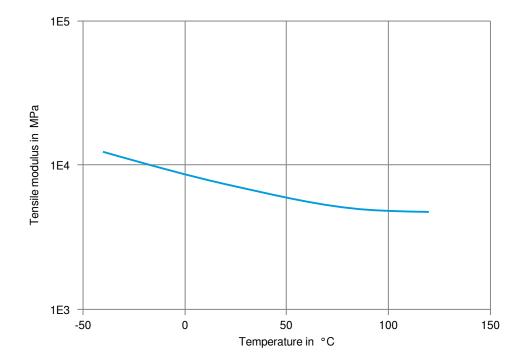
Tensile modulus-temperature (dry)







Tensile modulus-temperature (cond.)



(+) **18816996168** Ponciplastics.com



Page: 9 of 9

## Zytel<sup>®</sup> EFE7374 BK416

### **Chemical Media Resistance**

### Salt solutions

X Zinc Chloride solution (50% 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

Revised: 2025-05-01 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 not intended for use in medical or dental implants. Regardless of any such 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 m

© 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.