

# TORZEN T2021HSL BK01

## DESCRIPTION

PA66 injection moulding grade. Moderately Toughened, Heat Stabilized. Black colour.

Post-industrial grade produced with selected polymers coming from polymerization, fibres and compounding plants. Suitable for parts requiring impact resistance, and high flexibility.

ISO 1043: PA66

REGIONAL AVAILABILITY: North America, Europe, Asia Pacific, South and Central America, Near East/Africa

## MATERIAL HANDLING AND PROCESSING

The material is delivered in moisture-proof packaging ready for processing. Maximum recommended water content for best processing is 0.10%. Typical conditions with a desiccant drier: temperature 80 ° C, dew point -20 ° C or below, time 2-4 h or more. Avoid excessive shear rates and high thermal stresses for better processing. Special care must be taken to avoid moisture absorption and contamination with other polymers when adding regrind material. Colour variation and mechanical properties reduction may occur and should always be carefully monitored.

Injection Molding Processing Parameters

Melt Temperature  
275 - 295°C

Mold Temperature  
70 - 90°C

Injection Speed  
medium

## PRODUCT SAFETY AND APPROVALS

For safety instruction please refer to Material Safety Data Sheet  
ROHS compliant 2011/65/EU and following amendments



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PROPERTY	STANDARD	UNIT	VALUE	
			DAM*	Cond**
<b>PHYSICAL PROPERTIES</b>				
Density	ISO 1183	kg/m <sup>3</sup>	1100	
Melt Flow Rate	ISO 1133	g/10min		19
Moulding shrinkage - Parallel / Normal	ISO 294-4	%	1.7 / 1.7	
Water Absorption, 24h immersion at 23°C	ISO 62	%	1.5	
Moisture Absorption 23°C - 50%RH	ISO 62	%	2.3	
Viscosity Index (Sulfuric Acid)	ISO 307	ml/g	120	
<b>MECHANICAL PROPERTIES</b>				
Tensile Modulus	ISO 527-2/1A	MPa	2200	960
Stress at Yield	ISO 527-2/1A	MPa	57	39
Nominal Strain at Break	ISO 527-2/1A	%	44	>300
Flexural Modulus	ISO 178	MPa	2000	
Flexural Strength	ISO 178	MPa	74	
Charpy Notched Impact Strength	ISO 179/1eA	kJ/m <sup>2</sup>	19	105
Charpy Notched Impact Strength	ISO 179/1eA	kJ/m <sup>2</sup>	12	
Izod Notched Impact Strength	ISO 180/1A	kJ/m <sup>2</sup>	17	
<b>THERMAL PROPERTIES</b>				
Melting Temperature	ISO 11357-1/-3	°C	260	
Heat Deflection Temperature	ISO 75/2Af	°C	65	
Heat Deflection Temperature	ISO 75/2Bf	°C	190	
<b>FLAMMABILITY PROPERTIES</b>				
Automotive Interior Flammability	ISO 3795	mm/min		<30

\*: DAM = Dry As Moulded state according to ISO 16396-2, \*\*: Cond = Conditioned state similar to ISO 1110

1: Temperature [°C] / Load [kg]

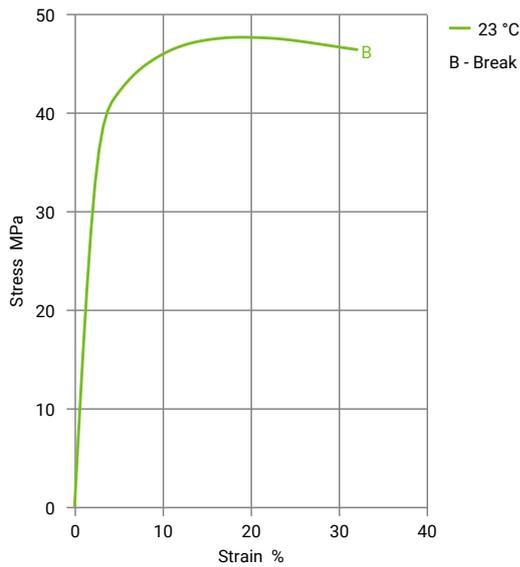
2: Melt Temperature [°C] / Mold Temperature [°C] / Cavity Pressure [MPa]



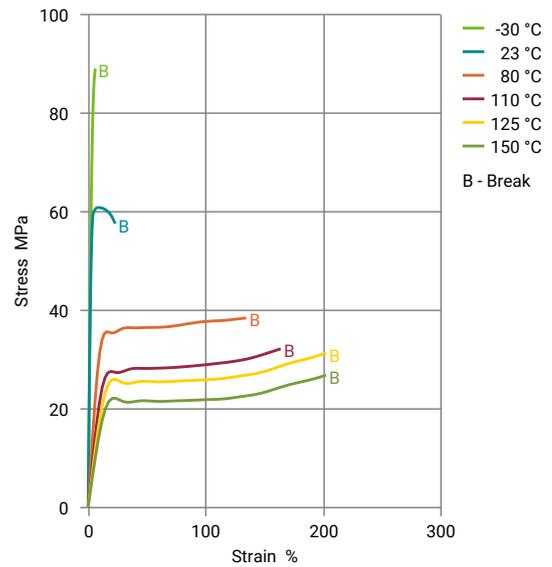
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## DIAGRAMS

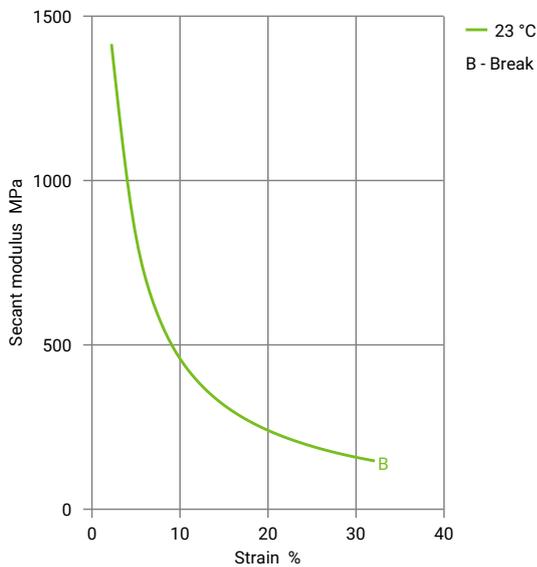
### Stress-strain (cond.)



### Stress-strain (dry)



### Secant modulus-strain (cond.)



### Secant modulus-strain (dry)

