



Product Information

TORZEN™ G4000HSL NC01 PA66 Resin

Product Description

TORZEN™ G4000HSL NC01 is a 40% glass reinforced, heat stabilized, natural, PA66 resin suitable for many injection molding applications where high tensile strength and dimensional stability are needed.

Properties (dry)		Value	Units	Method
Physical	Density	1.47	g/cm ³	ISO 1183
	Glass Fiber Content	40	%	ISO 3451/4
	Mold Shrinkage, 2.0 mm, Normal	0.85 – 0.95	%	ISO 294-4
	Mold Shrinkage, 2.0 mm, Parallel	0.35 – 0.45	%	ISO 294-4
	Water Absorption - 24 hours	0.70	%	ISO 62
	Water Absorption - Equilibrium @ 50% RH	1.1	%	ISO 62
Mechanical	Tensile Strength at Break	225	MPa	ISO 527
	Elongation at Break	3.0	%	ISO 527
	Tensile Modulus	12,300	MPa	ISO 527
	Flexural Modulus	10,300	MPa	ISO 178
	Flexural Strength	320	MPa	ISO 178
	Notched Charpy at 23°C	13	kJ/m ²	ISO 179
	Notched Charpy at -40°C	10	kJ/m ²	ISO 179
	Notched Izod at 23°C	13	kJ/m ²	ISO 180
Thermal	Melting Temperature, 10°C/min	262	°C	ISO 11357
	HDT at 0.45 MPa	260	°C	ISO 75
	HDT at 1.82 MPa	250	°C	ISO 75

General Information

Material Status

Commercial: Active

Availability

North America, South America, Europe, Asia

Features

Glass reinforced, heat stabilized, good machine feed and mold release

RoHS

No intentional additives or ingredients used in TORZEN™ G4000HSL NC01 PA66 resin are among those in the European directive 2002/95/EC, (RoHS) as amended.

Process Guidelines for Molding

Drying Temperature	80 °C
Drying Time*	3 - 4 hours
Barrel Temperatures	
Rear	250 - 270 °C
Middle	270 - 290 °C
Front	270 - 290 °C
Nozzle	270 - 290 °C
Processing Temperature (melt)	280 - 300 °C
Mold Temperature	50 - 90 °C
Back Pressure**	2 - 10 bar
Vent Depth	0.007 - 0.04 mm
Cushion (range)	4 - 6 mm
Suggested Moisture (max)	0.18 wt%
Suggested Moisture (min)	0.08 wt%
Screw Speed	Low rpm

* Initial moisture below 0.25 wt%. Use dehumidified air.

** Melt pressure

INVISTA Engineering Polymers

Additional Information:

epinfo@INVISTA.com

Issue Date: February 2012

Product Data Sheet Disclaimer

This Product Data Sheet contains selected information about a specific INVISTA product, or group of products, and particular uses of the same. It relates only to the identified product and any identified uses, and is based on information available as of the date hereof. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. THIS PRODUCT DATA SHEET DOES NOT CONTAIN A COMPLETE STATEMENT OF, AND DOES NOT CONSTITUTE A REPRESENTATION, WARRANTY OR GUARANTY WITH REGARD TO, A PRODUCT'S CHARACTERISTICS, USES, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THE SUITABILITY, SAFETY, EFFICACY, HAZARDS OR HEALTH EFFECTS OF THE PRODUCT, WHETHER USED SINGULARLY OR IN COMBINATION WITH ANY OTHER PRODUCT, EXCEPT TO THE EXTENT REQUIRED BY THE RELEVANT LAW AND REGULATIONS. Purchasers and users of the product are responsible for determining that the product is suitable for the intended use and that their workers and the general public are advised of any risks resulting from such use. Nothing contained in this Product Data Sheet shall be construed to modify any of the commercial terms pursuant to which the product was sold by INVISTA including, but not limited to, terms and conditions addressing each party's respective rights and obligations with regard to warranties, remedies and indemnification.

If purchasers and users believe or have reason to believe that the Product Data Sheet or other information provided to them by INVISTA is inaccurate or in any way insufficient for any purpose, they should immediately notify INVISTA of the same, and of the basis for their belief (for example, studies, data, reports of incidents, etc.) so that INVISTA can determine whether modification or supplementation of the Product Data Sheet, or other measures, are appropriate. Failure of purchasers and users to timely provide such notice shall be deemed a waiver by purchasers and users of any and all claims, demands or causes of action, including causes of action based on an alleged failure to warn, for personal injury or damage to the environment or property arising from or attributable to the use of product.

This disclaimer shall be effective to the extent allowed by law. Should any provision be deemed to be ineffective or unenforceable, that provision shall be deemed severed from the disclaimer and the remaining provisions shall continue to have full force and effect.