DuPont™ Zytel® HTN51G35FWS BK083

HIGH PERFORMANCE POLYAMIDE RESIN

Product Information

Zytel® HTN51G35FWS BK083 is a 35% glass reinforced, heat stabilized, lubricated, hydrolysis resistant high performance polyamide resin with improved fatigue and welding strength performance. It is also a PPA resin.

General information	Value	Unit	Test Standard
Resin Identification	PA6T/XT-GF35	-	ISO 1043
Part Marking Code	PA6T/XT-GF35	-	ISO 11469
Part Marking Code	>PPA-GF35<	-	SAE J1344
Rheological properties	**dry / cond**	**Unit**	**Test Standard**
Molding shrinkage, parallel	0.2 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5 / -	%	ISO 294-4, 2577
Mechanical properties	**dry / cond**	**Unit**	**Test Standard**
Tensile Modulus	13000 / 13000	MPa	ISO 527-1/-2
Stress at break	230 / 210	MPa	ISO 527-1/-2
Strain at break	2.6 / 2.6	%	ISO 527-1/-2
Charpy notched impact strength, 73°F	11 / -	kJ/m²	ISO 179/1eA
Thermal properties	**dry / cond**	**Unit**	**Test Standard**
Glass transition temperature, 18°F/min	130 / 95	°C	ISO 11357-1/-2
Temp. of deflection under load, 260 psi	263 / *	°C	ISO 75-1/-2
Flammability	**Value**	**Unit**	**Test Standard**
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	23	mm/min	ISO 3795 (FMVSS 302)
Other properties	**dry / cond**	**Unit**	**Test Standard**
Density	1470 / -	kg/m³	ISO 1183
VDA Properties	**Value**	**Unit**	**Test Standard**
Odor test	4	class	VDA 270
Injection	**Value**	**Unit**	**Test Standard**
Drying Recommended	yes	-	-
Drying Temperature	≥100	°C	-
Drying Time, Dehumidified Dryer	6 - 8	h	-
Processing Moisture Content	≤0.1	%	-
Melt Temperature Optimum	325	°C	-
Min. melt temperature	320	°C	-
Max. melt temperature	330	°C	-
Mold Temperature Optimum	150	°C	-
Min. mold temperature	140[1]	°C	-
Max. mold temperature	180	°C	-

1: Higher temperature needed for thinner sections.

Characteristics

Processing	• Injection Molding
Special characteristics	• Heat stabilized or stable to heat

Processing Texts

Injection molding

During molding, use proper protective equipment and adequate ventilation. Avoid exposure to fumes and limit the hold up time and temperature of the resin in the machine. Purge degraded resin carefully with HDPE.

When lower mold temperatures are used, the initial warpage and shrinkage may be lower, but the surface appearance and chemical resistance may be reduced, and the dimensional change may be greater when parts are subsequently heated.

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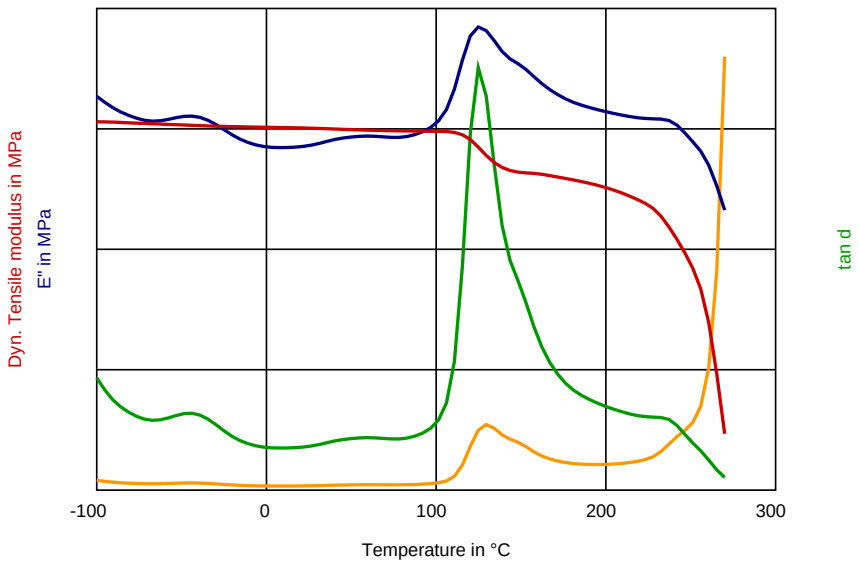
Diagrams

Dynamic Tensile modulus-temperature (dry)



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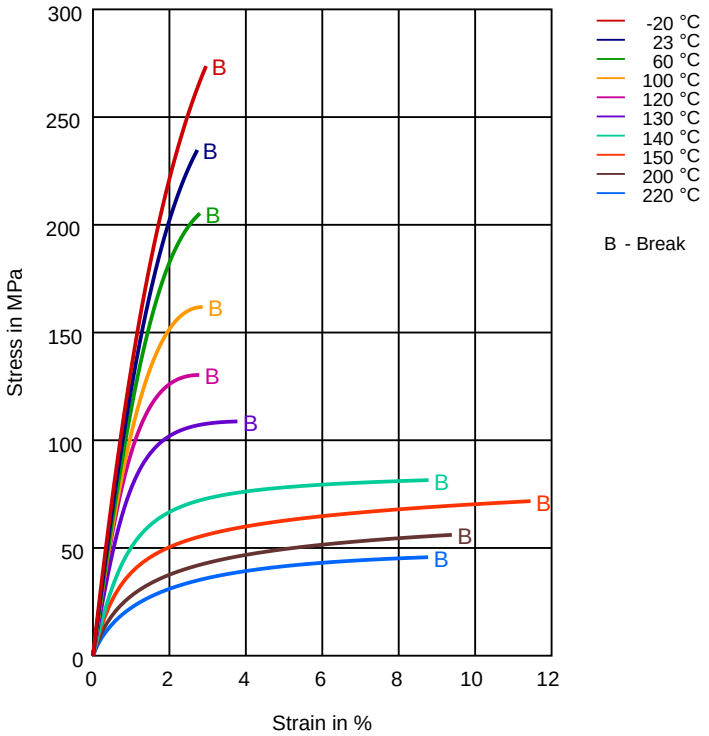
Stress-strain (dry)



To find out more, visit DuPont Performance Polymers or contact nearest DuPont location.

North America **Asia Pacific** **Europe/Middle East/Africa**
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EMAIL: fumei@foomx.com

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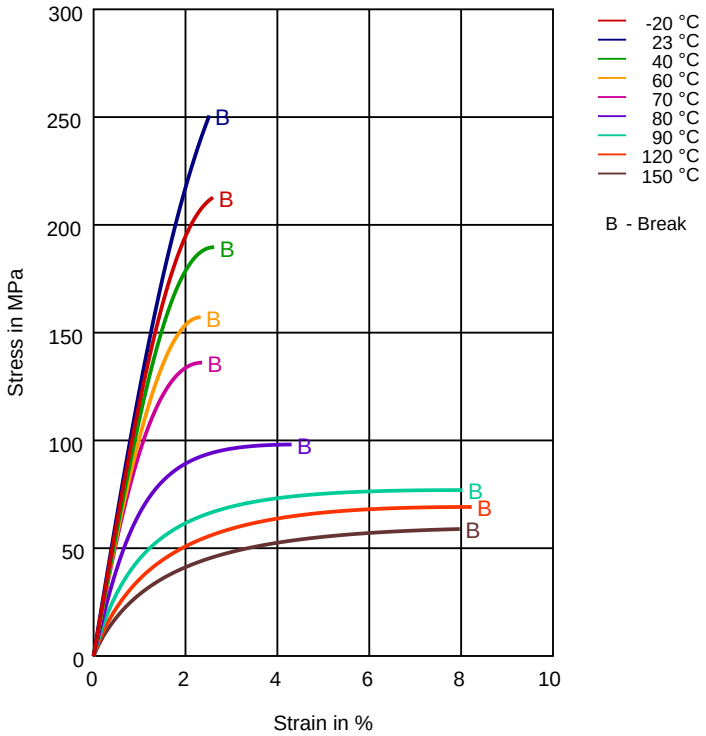
Stress-strain (cond.)



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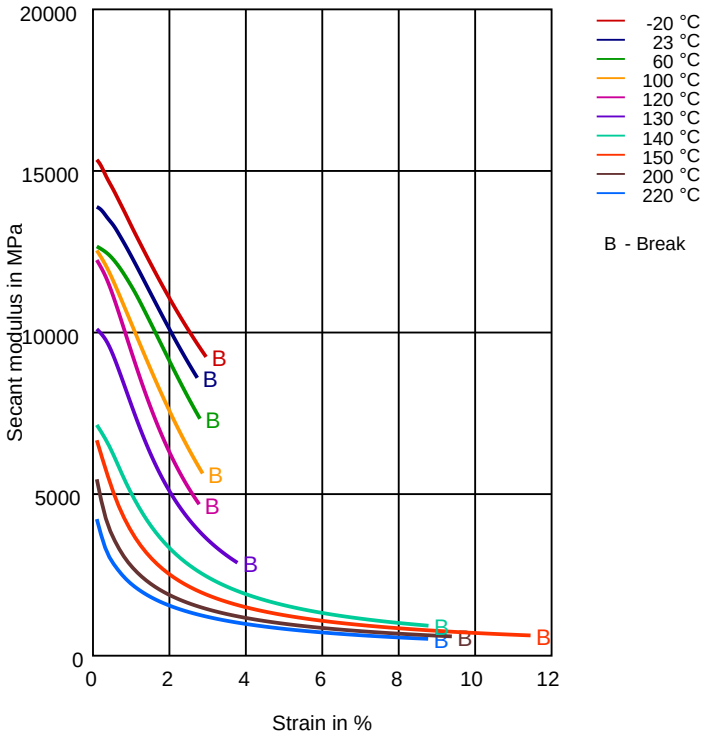
Secant modulus-strain (dry)



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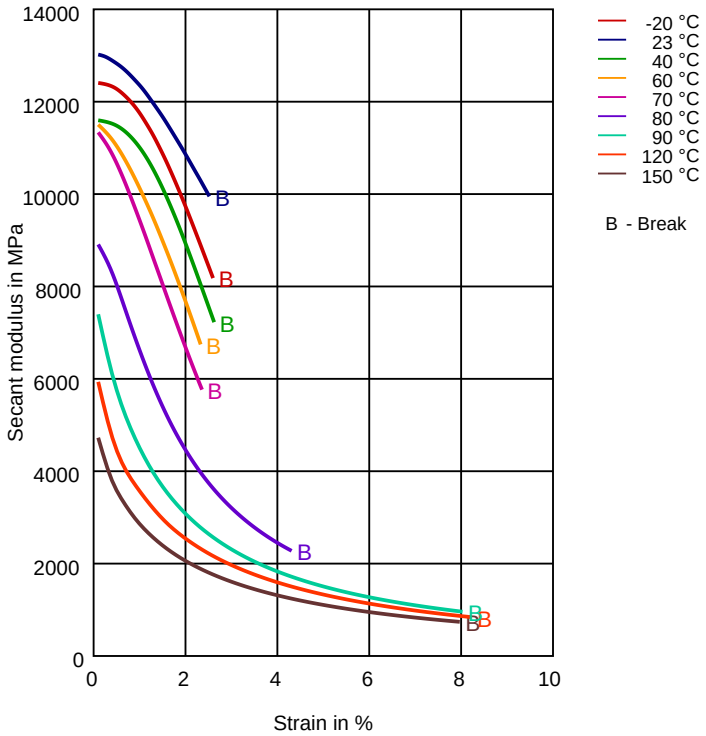
Secant modulus-strain (cond.)



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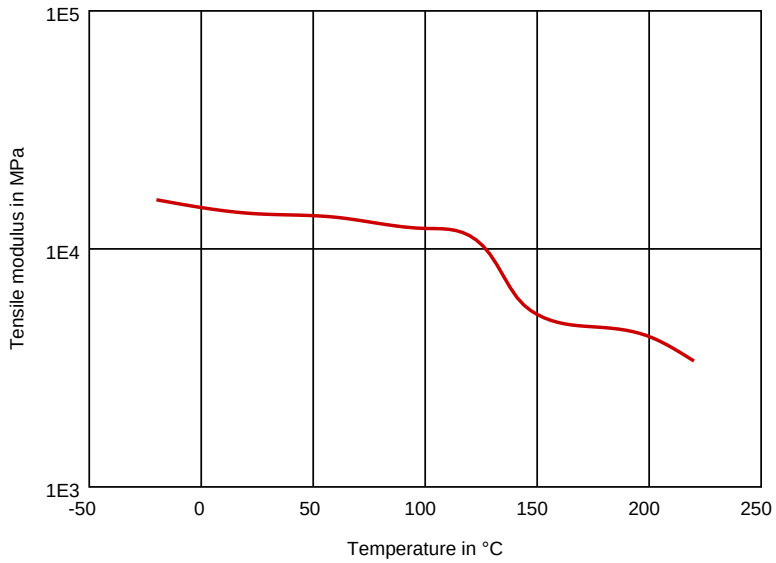
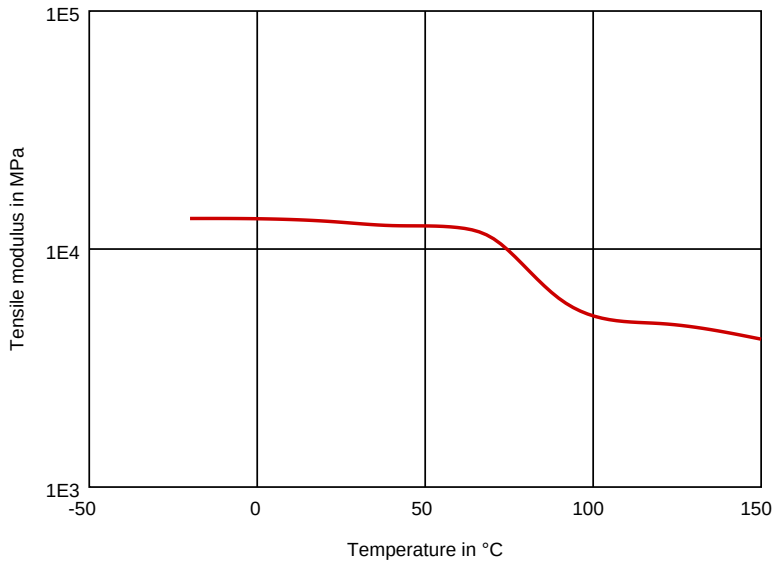
Tensile modulus-temperature (dry)



Tensile modulus-temperature (cond.)



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Chemical Media Resistance

Other

- ✓ Ethylene Glycol (50% by mass) in water (108°C)
- ✓ Water (23°C)
- ✓ Water (90°C)
- ✓ Coolant Glysantin G48, 1:1 in water (125°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).

✗ 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).

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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