

PEBAX®

6333 SP 01

Polyether block amide **Pebax® 6333 SP 01 resin** is a thermoplastic elastomer made of flexible polyether and rigid polyamide. This SP grade has been developed to be heat and UV resistant.

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Molding Shrinkage, parallel	1.2 / *	%	ISO 294-4, 2577
Molding Shrinkage, normal	1.4 / *	%	ISO 294-4, 2577
MECHANICAL PROPERTIES			
Tensile Modulus	307 / 285 44500 / 41300	MPa psi	ISO 527-1/-2
Yield stress	19 / 18 2760 / 2610	MPa psi	ISO 527-1/-2
Yield strain	22 / 22	%	ISO 527-1/-2
Nominal Strain at Break	>50 / >50	%	ISO 527-1/-2
Stress at 10% Elongation	14 / * 2030 / *	MPa psi	ISO 527-1/-2
Stress at 100% Elongation	17 / * 2470 / *	MPa psi	ISO 527-1/-2
Strain at Break TPE	>300 / *	%	ISO 527-1/-2
Stress at Break TPE	53 / * 7690 / *	MPa psi	ISO 527-1/-2
Compression Set at 23 °C, 24h	47 / *	%	ISO 815
Tear Strength	127 / *	kN/m	ISO 34-1
Abrasion Resistance	55 / *	mm ³	ISO 4649
Shore D Hardness	58 / *	-	ISO 868
Charpy Impact Strength, +23°C	No Break / No Break	kJ/m ²	ISO 179/1eU
Charpy Impact Strength, -30°C	No Break / No Break	kJ/m ²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	No Break / No Break	kJ/m ²	ISO 179/1eA
Charpy Notched Impact Strength, -30°C	- / 20 - / 9.51	kJ/m ² ftlb/in ²	ISO 179/1eA
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	169 / *	°C	ISO 11357-1/-3
Temp. of Deflection Under Load, 0.45 MPa	90 / * 194 / *	°C °F	ISO 75-1/-2
Vicat Softening Temperature, 50°C/h 50N	85 / * 185 / *	°C °F	ISO 306

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Coeff. of Linear Thermal Expansion, parallel	140 / *	E-6/K	ISO 11359-1/-2
Oxygen Index	20 / *	%	ISO 4589-1/-2
ELECTRICAL PROPERTIES			
Relative Permittivity, 100Hz	9 / -	-	IEC 60250
Relative Permittivity, 1MHz	4 / -	-	IEC 60250
Dissipation Factor, 100Hz	1440 / -	E-4	IEC 60250
Dissipation Factor, 1MHz	757 / -	E-4	IEC 60250
Volume Resistivity	9E11 / -	Ohm*m	IEC 60093
Surface Resistivity	* / 1E13	Ohm	IEC 60093
Dielectric (Electric) Strength	42.5 / -	kV/mm	IEC 60243-1
	1080 / -	kV/in	
Comparative Tracking Index	* / 600	-	IEC 60112
OTHER PROPERTIES			
Water Absorption	1.1 / *	%	Sim. to ISO 62
Humidity Absorption	0.7 / *	%	Sim. to ISO 62
Density	1010 / 1010	kg/m³	ISO 1183
	1.01 / 1.01	g/cm³	
Spec. heat capacity of melt	2800	J/(kg K)	-
Thermal conductivity of melt	0.18	W/(m K)	-
Density of melt	830	kg/m³	-
	51.8	lb/ft³	

MAIN APPLICATIONS: • Athletic foot wear components • Ski boots

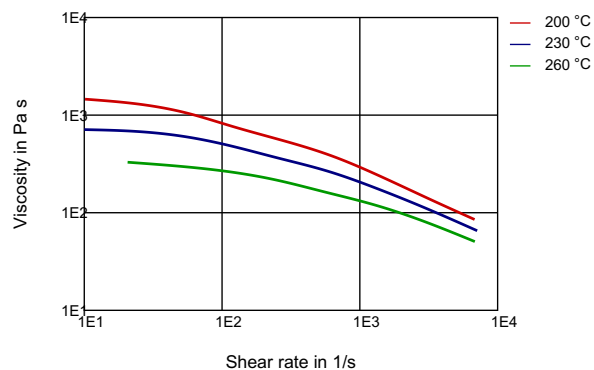
PACKAGING:

This grade is delivered dried in sealed packaging (20 or 25 kg bags) ready to be processed.

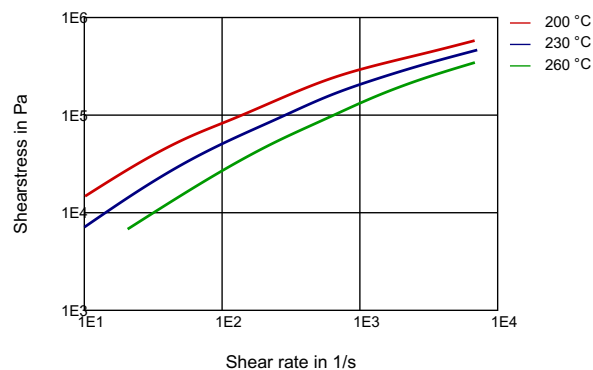
PEBAX® 6333 SP 01

DIAGRAMS

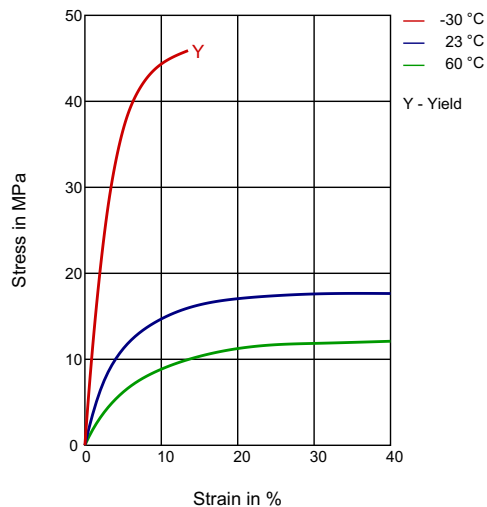
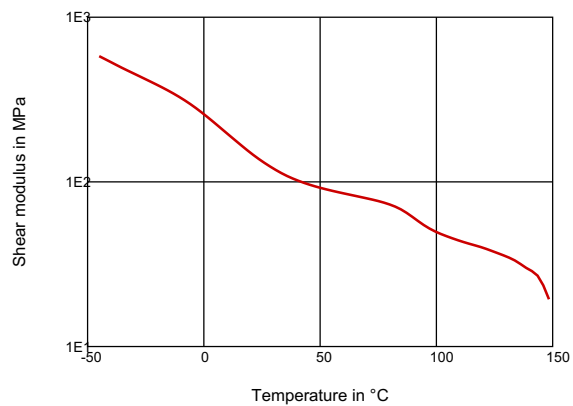
VISCOSITY-SHEAR RATE



SHEARSTRESS-SHEAR RATE

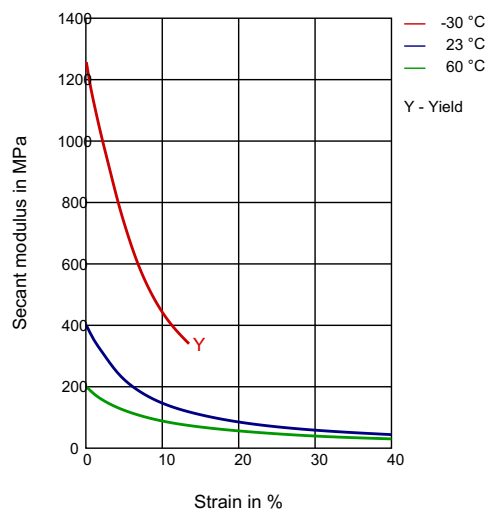


DYNAMIC SHEAR MODULUS-TEMPERATURE STRESS-STRAIN

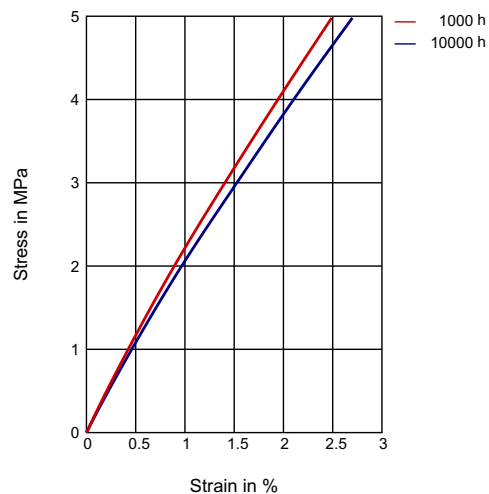


PEBAX® 6333 SP 01

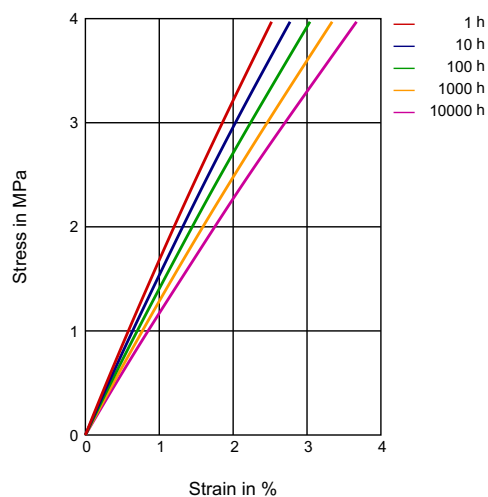
SECANT MODULUS-STRAIN



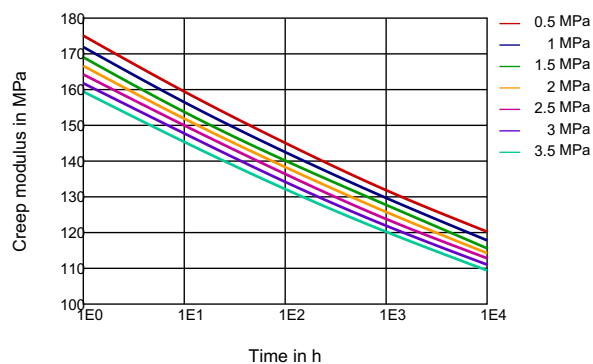
STRESS-STRAIN (ISOCHRONOUS) 73°F



STRESS-STRAIN (ISOCHRONOUS) 104°F

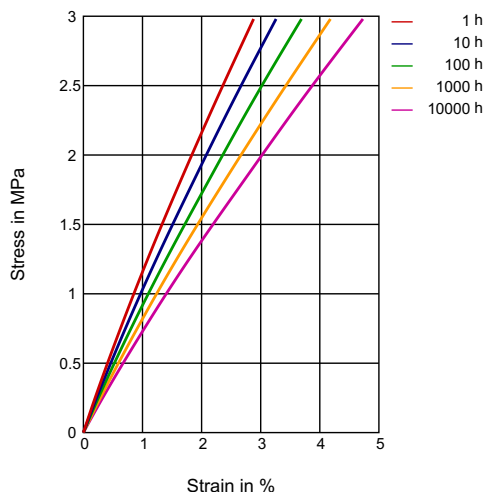


CREEP MODULUS-TIME 104°F

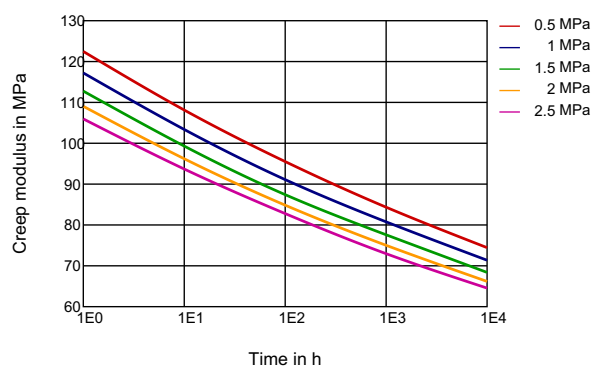


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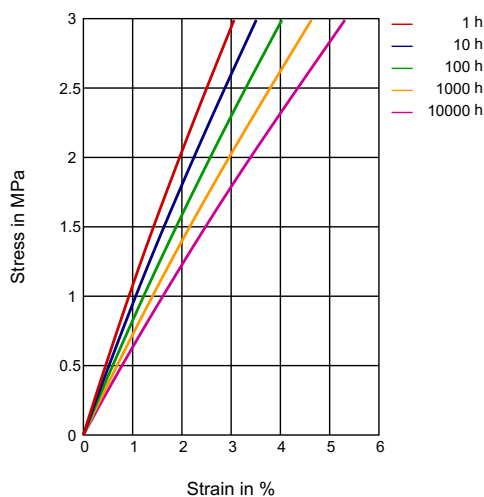
STRESS-STRAIN (ISOCHRONOUS) 140°F



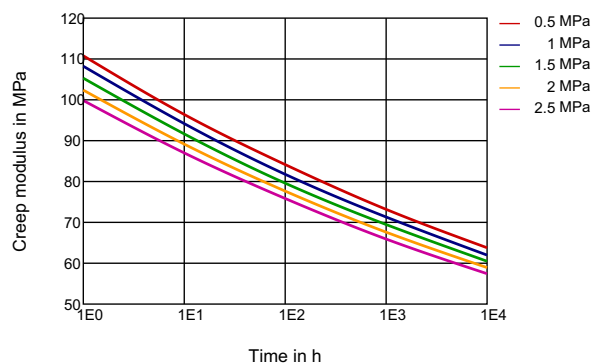
CREEP MODULUS-TIME 140°F



STRESS-STRAIN (ISOCHRONOUS) 176°F

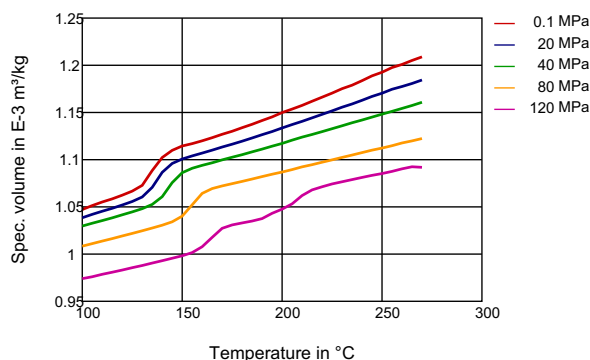


CREEP MODULUS-TIME 176°F



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SPECIFIC VOLUME-TEMPERATURE (PVT)



Processing conditions:

- Typical melt temperature (Min / Recommended / Max) : 230°C / 260°C / 290°C.
- Typical mold temperature : 25 – 60°C.
- Drying time and temperature (only necessary for bags opened for more than two hours) : 4-6 hours at 65-75°C.

Processing conditions:

- Typical melt temperature (Min / Recommended / Max) : 210°C / 225°C / 240°C.
- Drying time and temperature (only necessary for bags opened for more than two hours) : 4-6 hours at 65-75°C.

PROCESSING

Injection Molding, Film Extrusion, Profile Extrusion, Other Extrusion, Transfer Molding, Casting, Thermoforming

DELIVERY FORM

Pellets

SPECIAL CHARACTERISTICS

Heat Stabilized, Light Stabilized

REGIONAL AVAILABILITY

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