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.

MAIN CHARACTERISTICS

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	MPa	ISO 527-1/-2
Yield stress	19 / 18	MPa	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 / *	MPa	ISO 527-1/-2
Stress at 100% Elongation	17 / *	MPa	ISO 527-1/-2
Strain at Break TPE	>300 / *	%	ISO 527-1/-2
Stress at Break TPE	53 / *	MPa	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, 15s	58 / *	-	ISO 7619-1
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	kJ/m^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 / *	°C	ISO 75-1/-2
Vicat Softening Temperature, 50°C/h 50N	157 / *	°C	ISO 306
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

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Dielectric (Electric) Strength	42.5 / -	kV/mm	IEC 60243-1
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
Spec. heat capacity of melt	2800	J/(kg K)	-
Thermal conductivity of melt	0.18	W/(m K)	-
Density of melt	830	kg/m³	-

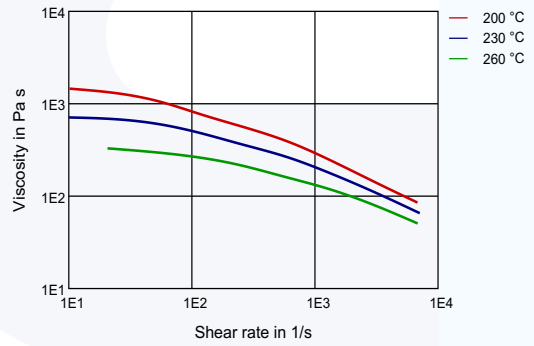
MAIN APPLICATIONS:
• Athletic foot wear components • Ski boots

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

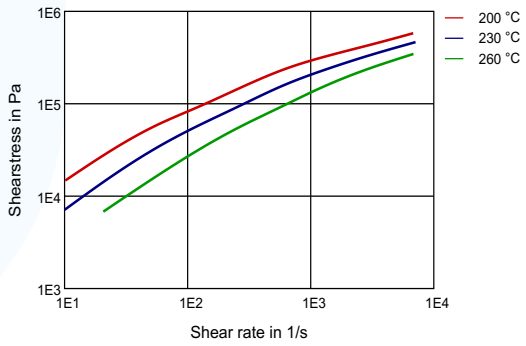
SHELF LIFE:
Two years from the delivery. For any use above this limit, please refer to our technical services.

DIAGRAMS

VISCOSITY-SHEAR RATE



SHEARSTRESS-SHEAR RATE



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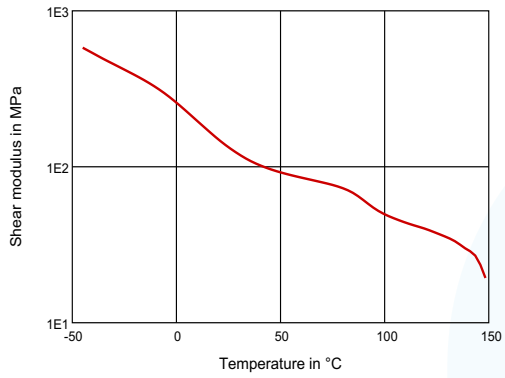
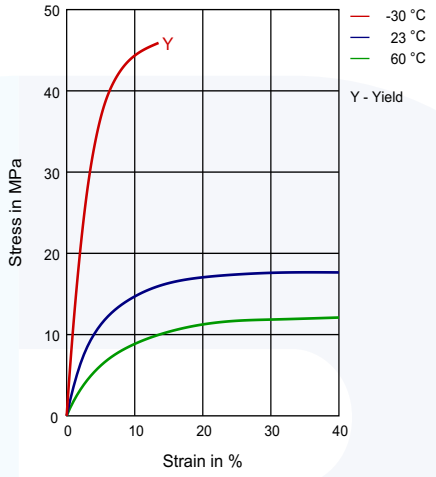
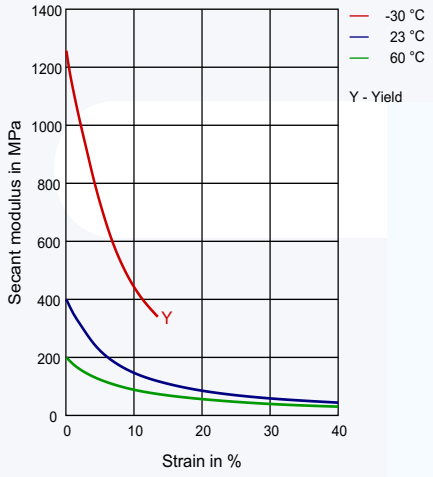
DYNAMIC SHEAR MODULUS-TEMPERATURE



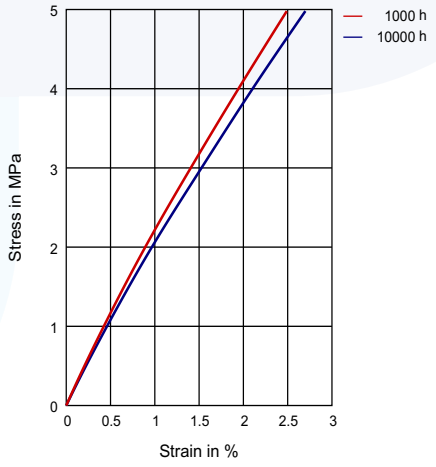
STRESS-STRAIN



SECANT MODULUS-STRAIN



STRESS-STRAIN (ISOCHRONOUS) 23°C



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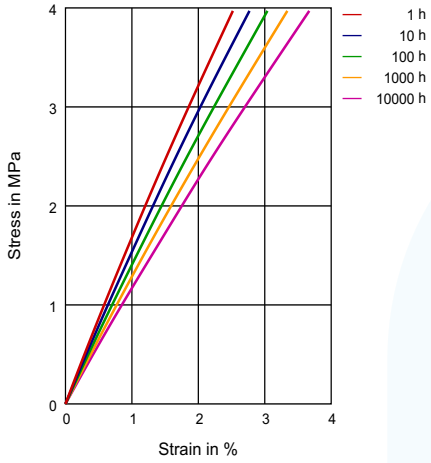
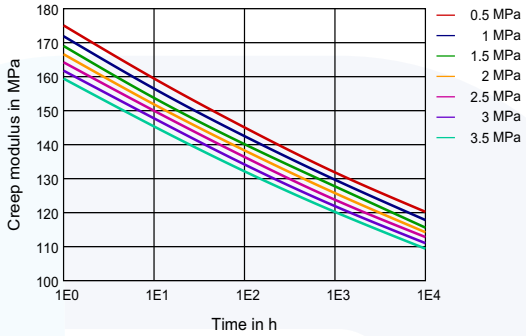
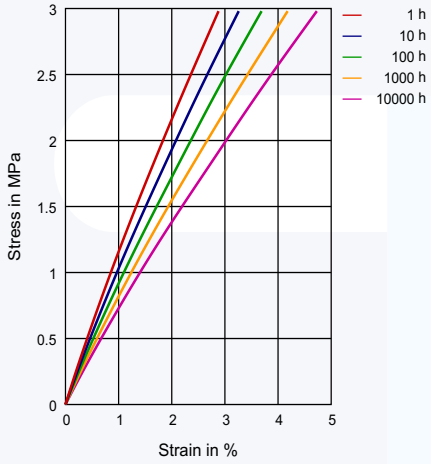
STRESS-STRAIN (ISOCHRONOUS) 40°C



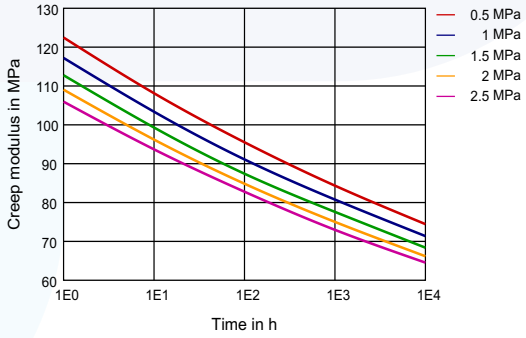
CREEP MODULUS-TIME 40°C



STRESS-STRAIN (ISOCHRONOUS) 60°C



CREEP MODULUS-TIME 60°C



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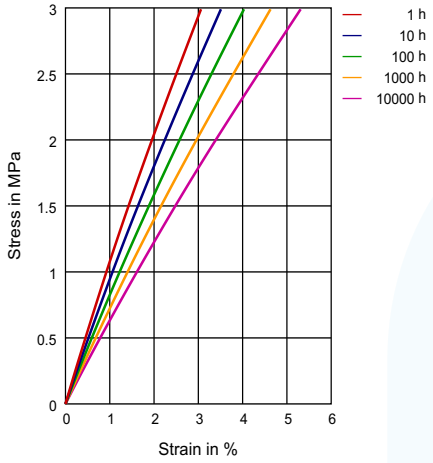
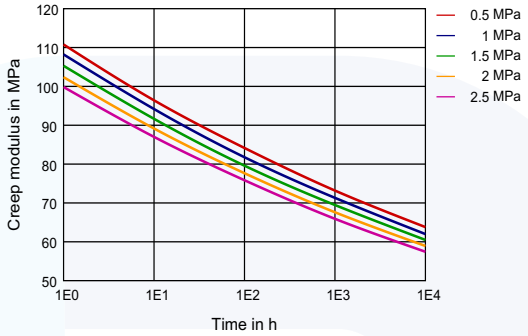
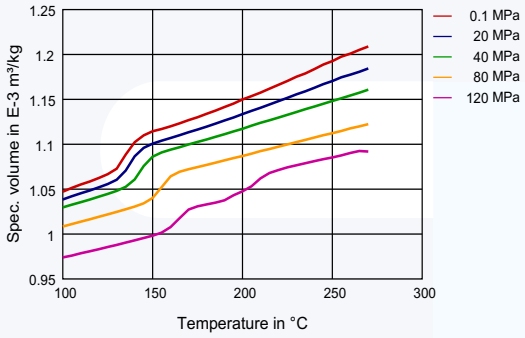
STRESS-STRAIN (ISOCHRONOUS) 80°C



CREEP MODULUS-TIME 80°C



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

SPECIAL CHARACTERISTICS

Heat Stabilized, Light Stabilized

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Extrusion, Transfer Molding, Casting, Thermoforming

DELIVERY FORM

Pellets

REGIONAL AVAILABILITY

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

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pebax.com

Arkema Inc. – Technical Polymers
900 First Avenue
King of Prussia, PA 19406
Tel.: +1 610 205 7000
Fax: +1 610 205 7497
arkema-americas.com

PEBAX® BY ARKEMA

Headquarters: Arkema France
420, rue d'Estienne d'Orves
92705 Colombes Cedex – France
Tel.: +33 1 49 00 80 80
Fax: +33 1 49 00 83 96
arkema.com