

# PEBAX<sup>®</sup>

## 7033 SP 01

Polyether block amide **Pebax<sup>®</sup> 7033 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
<b>RHEOLOGICAL PROPERTIES</b>			
Molding Shrinkage, parallel	1.2 / *	%	ISO 294-4, 2577
Molding Shrinkage, normal	1.5 / *	%	ISO 294-4, 2577
<b>MECHANICAL PROPERTIES</b>			
Tensile Modulus	414 / 390	MPa	ISO 527-1/-2
Yield stress	23 / 22	MPa	ISO 527-1/-2
Yield strain	22 / 20	%	ISO 527-1/-2
Nominal Strain at Break	>50 / >50	%	ISO 527-1/-2
Stress at 10% Elongation	22 / *	MPa	ISO 527-1/-2
Stress at 100% Elongation	21 / *	MPa	ISO 527-1/-2
Strain at Break TPE	>300 / *	%	ISO 527-1/-2
Stress at Break TPE	54 / *	MPa	ISO 527-1/-2
Tear Strength	149 / *	kN/m	ISO 34-1
Shore D Hardness	61 / *	-	ISO 868
Charpy Impact Strength, +23°C	No Break / No Break	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy Impact Strength, -30°C	No Break / No Break	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	No Break / 120	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Notched Impact Strength, -30°C	- / 20	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL PROPERTIES</b>			
Melting Temperature, 10°C/min	172 / *	°C	ISO 11357-1/-3
Temp. of Deflection Under Load, 0.45 MPa	99 / *	°C	ISO 75-1/-2
Vicat Softening Temperature, 50°C/h 50N	164 / *	°C	ISO 306
Coeff. of Linear Thermal Expansion, parallel	160 / *	E-6/K	ISO 11359-1/-2
<b>ELECTRICAL PROPERTIES</b>			
Surface Resistivity	* / 4E13	Ohm	IEC 60093
Comparative Tracking Index	* / 600	-	IEC 60112
<b>OTHER PROPERTIES</b>			
Water Absorption	1.1 / *	%	Sim. to ISO 62
Humidity Absorption	0.7 / *	%	Sim. to ISO 62
Density	1010 / 1010	kg/m <sup>3</sup>	ISO 1183

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Spec. heat capacity of melt	2700	J/(kg K)	-
Thermal conductivity of melt	0.2	W/(m K)	-
Density of melt	830	kg/m <sup>3</sup>	-

**MAIN APPLICATIONS:**

- Athletic foot wear components
- Ski shoes
- Tennis racket bumpers
- Zip fasteners

### PACKAGING:

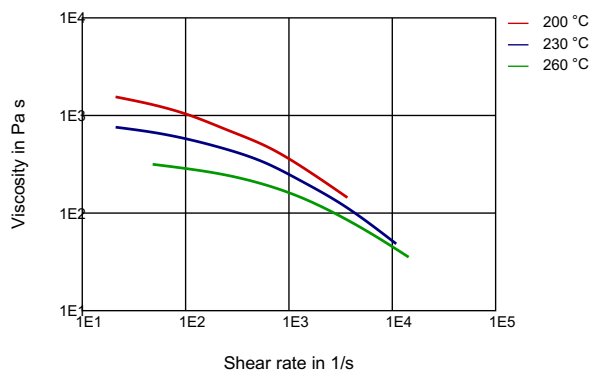
This grade is delivered dried in sealed packaging (20 or 25 kg bags) ready to be processed.

### SHELF LIFE:

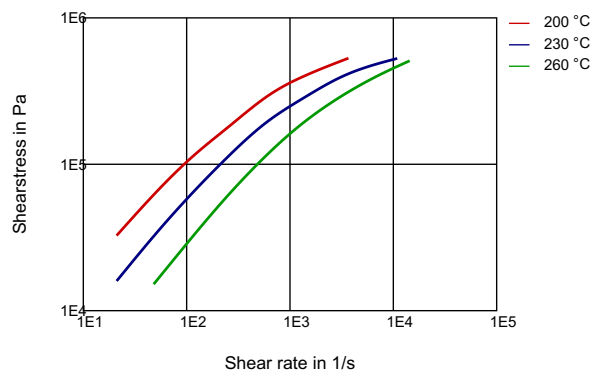
Two years from the delivery. For any use above this limit, please refer to our technical services.

### DIAGRAMS

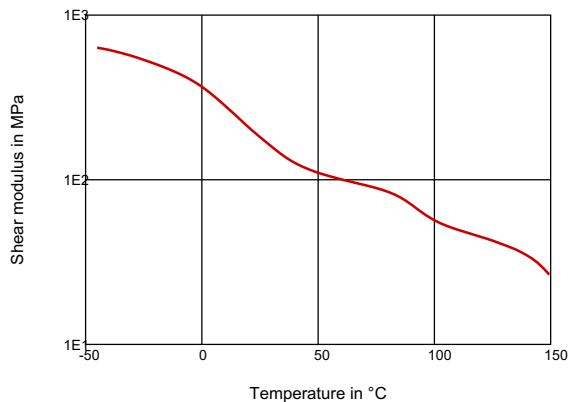
#### VISCOSITY-SHEAR RATE



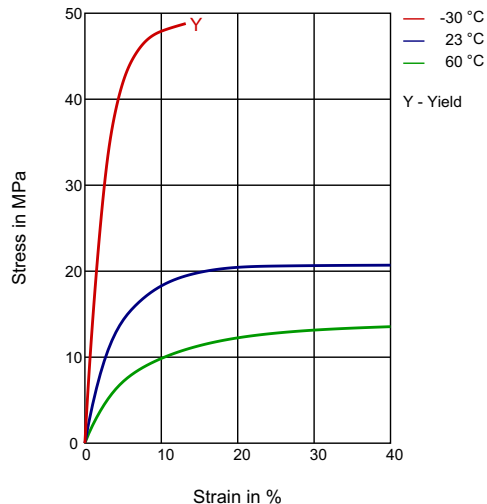
#### SHEARSTRESS-SHEAR RATE



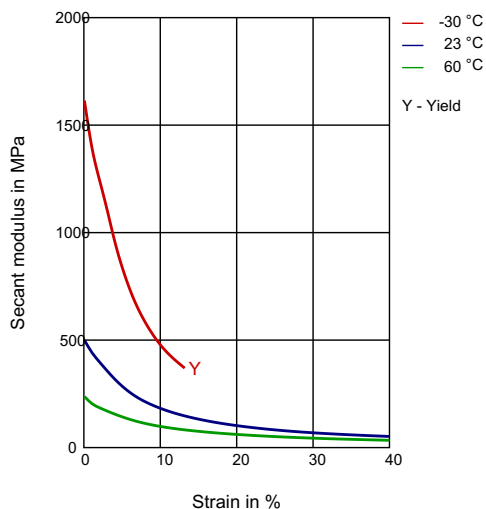
### DYNAMIC SHEAR MODULUS-TEMPERATURE



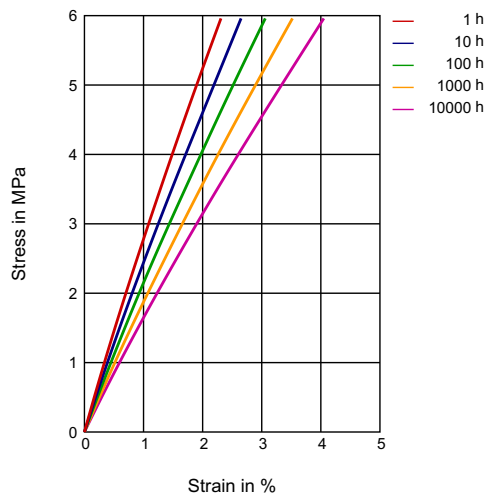
### STRESS-STRAIN



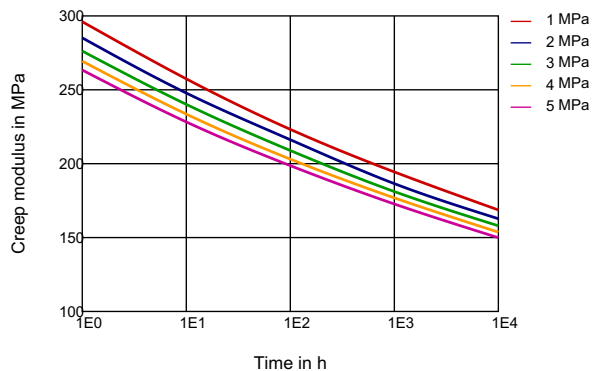
### SECANT MODULUS-STRAIN



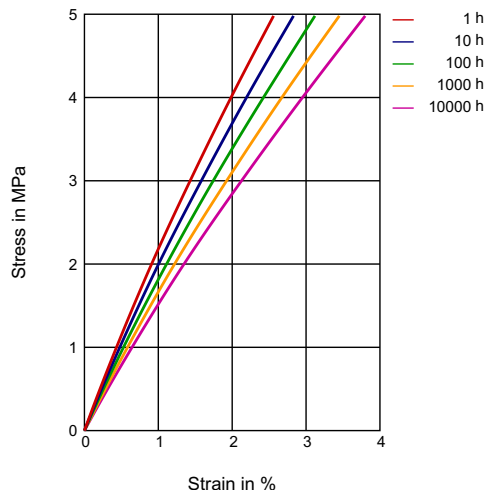
### STRESS-STRAIN (ISOCHRONOUS) 23°C



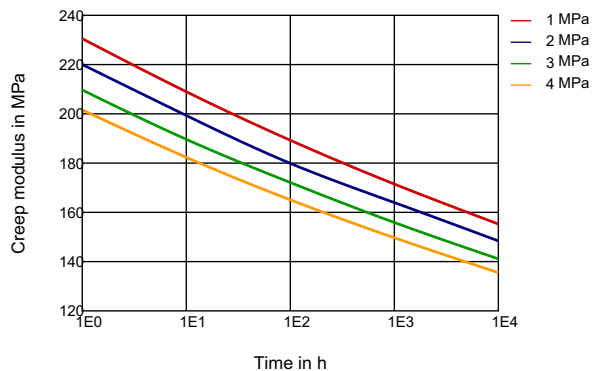
### CREEP MODULUS-TIME 23°C



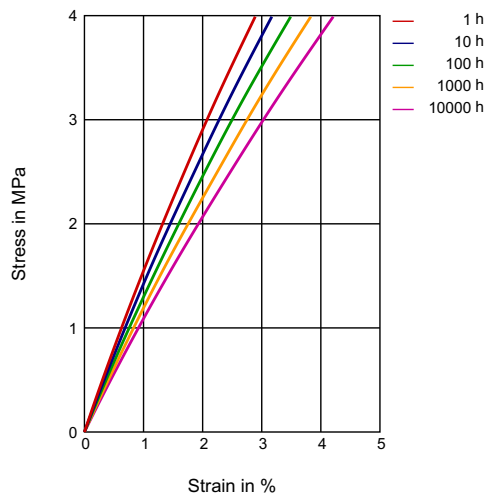
### STRESS-STRAIN (ISOCHRONOUS) 40°C



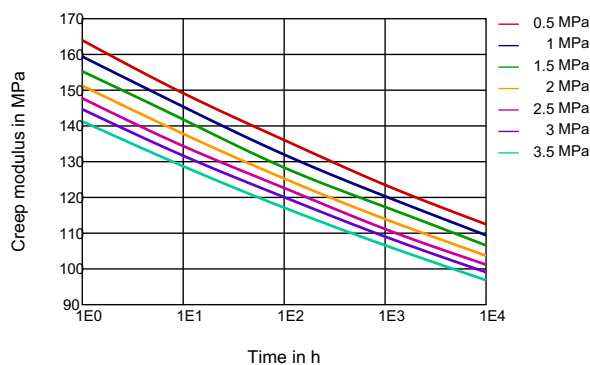
### CREEP MODULUS-TIME 40°C



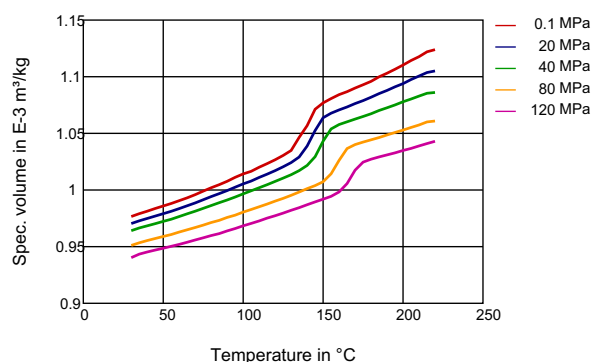
### STRESS-STRAIN (ISOCHRONOUS) 80°C



### 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) : 5-7 hours at 70-80°C

#### Processing conditions:

- Typical melt temperature (Min / Recommended / Max) : 220°C / 235°C / 250°C.
- Drying time and temperature (only necessary for bags opened for more than two hours) : 5-7 hours at 70-80°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

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