

## TECHNICAL DATA SHEET

# PEBAX® 5533 SP 01

## POLYETHER BLOCK AMIDE PELLET

PEBAX® 5533 SP 01 is a polyether block amide, a thermoplastic elastomer made of flexible polyether and rigid polyamide. This SP grade is heat & UV stabilized. It is used in sport and consumer applications.

### DESIGNATION

PEBA

### MAIN APPLICATIONS

- Winter Sports - Ski Boots
- Footwear - Outsole/Components

### DELIVERY FORM

- Pellets

### TRANSFORMATION PROCESSES

- Extrusion - General
- Film Extrusion
- Injection Molding
- Tube Extrusion

### ADDITIVES

- Heat Stabilized
- Light Stabilized

## RHEOLOGICAL PROPERTIES

プロパティ	価値	テスト基準
Shrinkage, Parallel (t+24h)	0.8 %	ISO 294-4
Shrinkage, Normal (t+24h)	1.0 %	ISO 294-4

## MECHANICAL PROPERTIES

プロパティ	DRY / COND VALUE*	テスト基準
Flexural modulus, 23°C (73°F)	- / 170 MPa	ISO 178
Tensile modulus, 23°C (73°F), 1 mm/min	170 / 161 MPa	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	12 / 12 MPa	ISO 527-1/-2
Nominal strain at break, 23°C (73°F), 50 mm/min	> 450 / > 450 %	ISO 527-1/-2
Stress at break, 23°C (73°F), 50 mm/min	- / 52 MPa	ISO 527-1/-2
Hardness, Shore D, 15 s	- / 50	ISO 868
Charpy unnotched impact strength, 23°C (73°F)	No Break / No Break	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	No Break / No Break	ISO 179 1eU
Charpy notched impact strength, -30°C (-22°F)	No Break / No Break	ISO 179 1eA
Charpy notched impact strength, 23°C (73°F)	No Break / No Break	ISO 179 1eA
Compression set	43 / - %	ISO 815
Yield strain, 23°C (73°F), 50 mm/min	25 / 25 %	ISO 527-1/-2
Abrasion resistance	47 / - mm <sup>3</sup>	ISO 4649

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\*DRY: Dry As Molded (DAM) if pellet / Dry if powder.  
COND: Conditionned.

## THERMAL PROPERTIES

プロパティ	価値	テスト基準
Vicat softening temperature, 50N at 50°C/h	66 °C	ISO 306
Coefficient of linear thermal expansion	170 10E-6 / °K	ISO 11359-1/-2
Heat deflection temperature, 0.45 MPa	66 °C	ISO 75-1/-2
Melting temperature, 10°C/min	159 °C	ISO 11357-1/-3

## ELECTRICAL PROPERTIES

プロパティ	DRY / COND VALUE*	テスト基準
Volumic (transversal) resistivity, 23°C (73,4°F)	- / 3.2E+11 ohm/m	IEC 62631-3-1
Surface resistivity, 23°C (73,4°F)	- / 3.0E+12 ohm/sq	IEC 62631-3-2
Comparative tracking index, 23°C (73,4°F)	- / 600	IEC 60112
Dielectric stress, 23°C (73,4°F)	- / 38.5	IEC 60243-1
Relative permittivity, 100Hz	- / 9	IEC 60250
Relative permittivity, 1Mhz	- / 5	IEC 60250
Dissipation factor, 100Hz	- / 1110	IEC 60250
Dissipation factor, 1Mhz	- / 1110	IEC 60250

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## OTHER PROPERTIES

プロパティ	価値	テスト基準
Water absorption, 23°C(73°F), immersion, equilibrium	1.2 %	ISO 62
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	0.6 %	ISO 62
Specific gravity, 23°C (73°F)	1.01 g/cm <sup>3</sup>	ISO 1183-1

## 包装

This grade is delivered dried in sealed packaging ready to be processed. Available packaging:

- 20 kg / 44 lb bags
- 25 kg / 55 lb bags

## 賞味期限

Two years from the date of delivery, when stored properly (sealed bags, appropriate moisture, UV protection and temperature). For any use above this limit, please refer to our technical services.

## PROCESSING CONDITIONS:

- 典型的な溶融温度 (最小 / 推奨 / 最大) - 射出成形: 210°C / 240°C / 270°C (410°F / 430°F / 520°F)
- 典型的な金型温度 - 射出成形: 20-60°C (70-140°F)
- Drying time and temperature: 65-75°C (150-165°F) / 4-6 hours

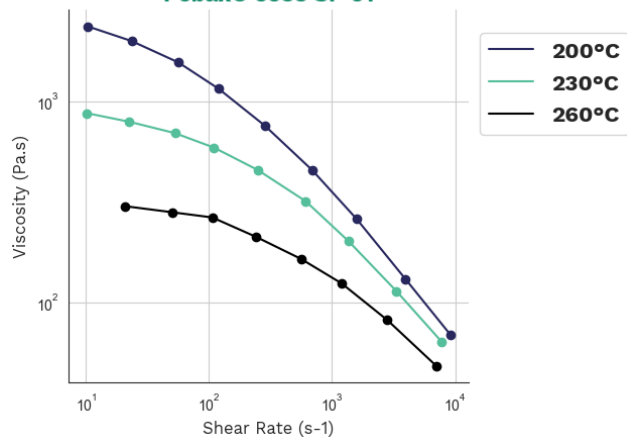
# PEBAX® 5533 SP 01

## REGIONAL AVAILABILITY

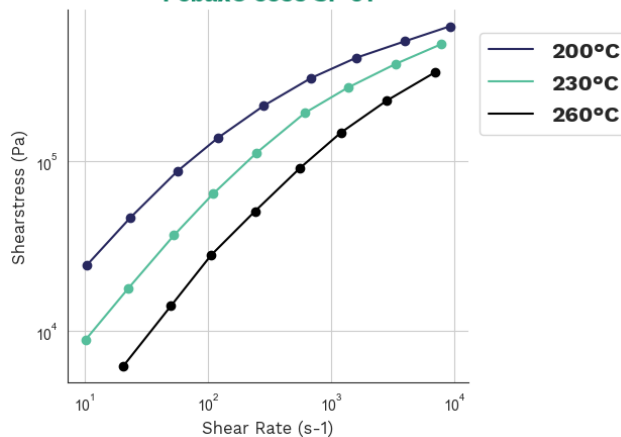
Asia Pacific, Europe, Latin America and the Caribbean, Middle East, Northern America

## DIAGRAMS

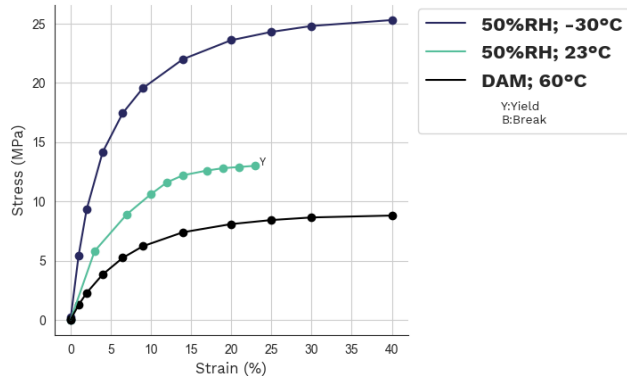
**Viscosity-shear rate**  
Pebax® 5533 SP 01



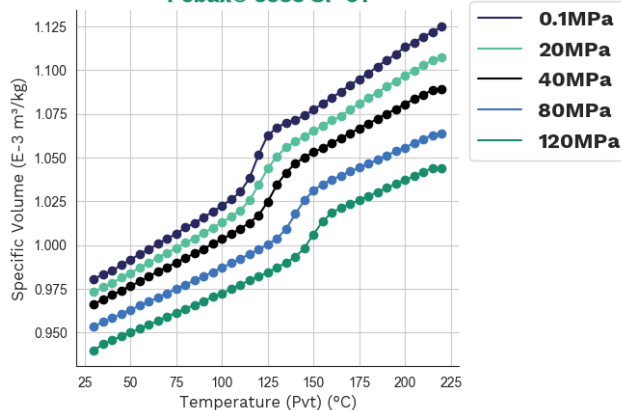
**Shearstress-shear rate**  
Pebax® 5533 SP 01



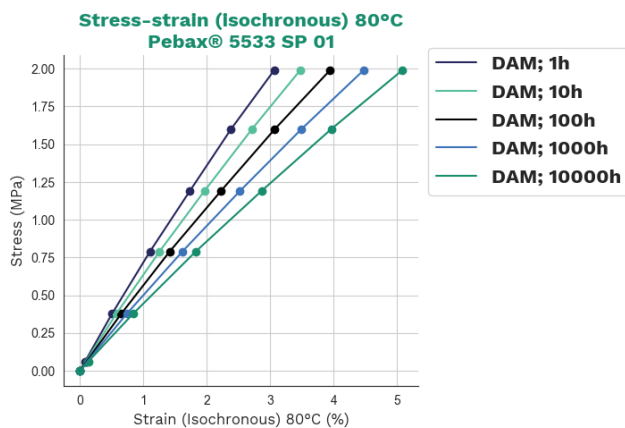
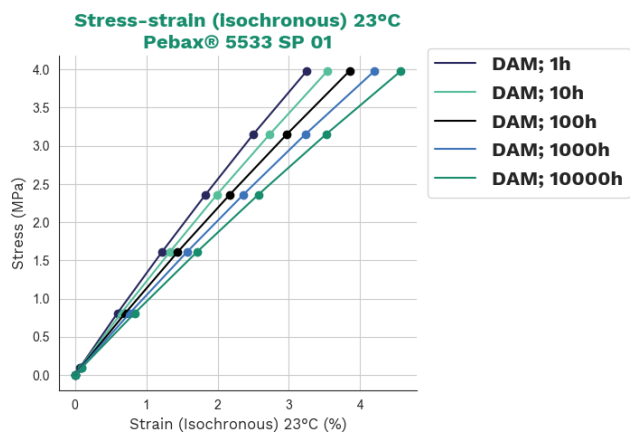
**Stress-strain**  
Pebax® 5533 SP 01



**Specific volume-temperature (pvT)**  
Pebax® 5533 SP 01



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