

TECHNICAL DATA SHEET

PEBAX® 4033 SP 01

POLYETHER BLOCK AMIDE PELLET

PEBAX® 4033 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

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

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

ADDITIVES

- Heat Stabilized
- Light Stabilized

RHEOLOGICAL PROPERTIES

| 속성 | 값 | 테스트 표준 |
|-----------------------------|-------|-----------|
| Shrinkage, Parallel (t+24h) | 0.6 % | ISO 294-4 |
| Shrinkage, Normal (t+24h) | 1.3 % | ISO 294-4 |

MECHANICAL PROPERTIES

| 속성 | DRY / COND VALUE* | 테스트 표준 |
|---|------------------------|--------------|
| Compression set | 32 / - % | ISO 815 |
| Hardness, Shore A, 15 s | - / 89 | ISO 868 |
| Hardness, Shore D, 15 s | - / 35 | ISO 868 |
| Charpy unnotched impact strength, 23°C (73°F) | - / No Break | ISO 179 1eU |
| Charpy unnotched impact strength, -30°C (-22°F) | - / No Break | ISO 179 1eU |
| Charpy notched impact strength, 23°C (73°F) | No Break / No Break | ISO 179 1eA |
| Charpy notched impact strength, -30°C (-22°F) | No Break / No Break | ISO 179 1eA |
| Stress at 50% strain, 23°C (73°F), 50 mm/min | 9 / 9 MPa | ISO 527-1/-2 |
| Tensile modulus, 23°C (73°F), 1 mm/min | 73 / 71 MPa | ISO 527-1/-2 |
| Abrasion resistance | 48 / - mm ³ | ISO 4649 |
| Flexural modulus, 23°C (73°F) | - / 77 MPa | ISO 178 |
| Stress at break, 23°C (73°F), 50 mm/min | - / 40 MPa | ISO 527-1/-2 |
| Nominal strain at break, 23°C (73°F), 50 mm/min | > 450 / > 450 % | ISO 527-1/-2 |

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

| 속성 | 값 | 테스트 표준 |
|--|--------|----------------|
| Glass transition temperature, 10°C/min | -65 °C | ISO 11357-1/-2 |
| Heat deflection temperature, 0.45 MPa | 52 °C | ISO 75-1/-2 |
| Melting temperature, 10°C/min | 160 °C | ISO 11357-1/-3 |

THERMAL PROPERTIES/ELECTRICAL PROPERTIES

| 속성 | DRY / COND VALUE* | 테스트 표준 |
|--|--------------------|---------------|
| Surface resistivity, 23°C (73,4°F) | - / 3.0E+12 ohm/sq | IEC 62631-3-2 |
| Volumic (transversal) resistivity, 23°C (73,4°F) | - / 2.6E+11 ohm/m | IEC 62631-3-1 |
| Comparative tracking index, 23°C (73,4°F) | - / 600 | IEC 60112 |
| Dielectric stress, 23°C (73,4°F) | - / 39 | IEC 60243-1 |
| Relative permittivity, 100Hz | - / 7 | IEC 60250 |
| Relative permittivity, 1Mhz | - / 5 | IEC 60250 |
| Dissipation factor, 100Hz | - / 710 | IEC 60250 |
| Dissipation factor, 1Mhz | - / 710 | IEC 60250 |

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

OTHER PROPERTIES

| 속성 | 값 | 테스트 표준 |
|--|---------------------|------------|
| Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR | 0.5 % | ISO 62 |
| Water absorption, 23°C (73°F), immersion, equilibrium | 1.2 % | ISO 62 |
| Specific gravity, 23°C (73°F) | 1 g/cm ³ | ISO 1183-1 |

PACKAGING

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

- 26 kg / 55 lb bags
- 551 kg rigid containers

SHELF LIFE

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.

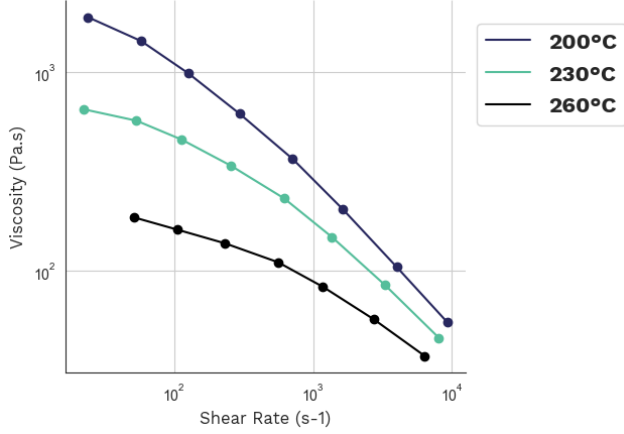
PROCESSING CONDITIONS:

- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 210°C / 240°C / 270°C (410°F / 430°F / 520°F)
- Typical mold temperature - Injection molding: 10-30°C (50-90°F)
- Drying time and temperature: 60-70°C (140-160°F) / 4-8 hours

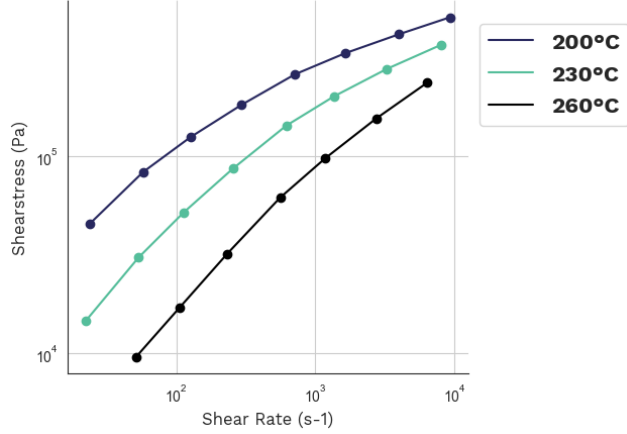
PEBAX® 4033 SP 01

DIAGRAMS

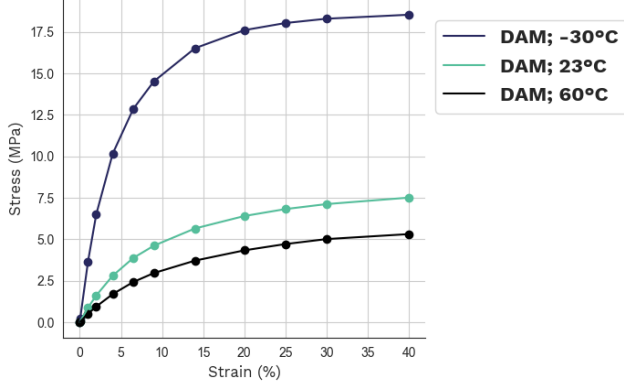
Viscosity-shear rate
Pebax® 4033 SP 01



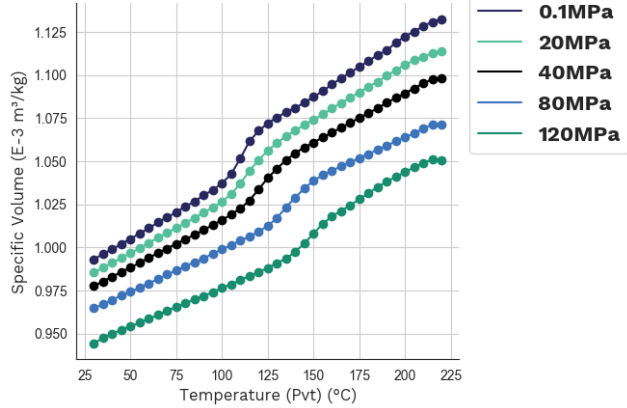
Shearstress-shear rate
Pebax® 4033 SP 01



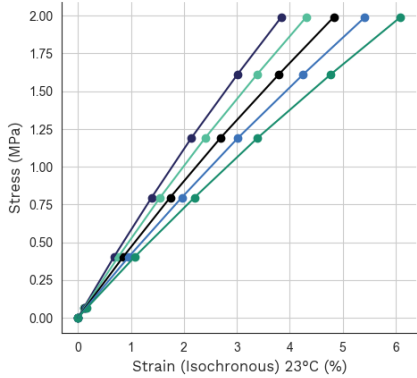
Stress-strain
Pebax® 4033 SP 01



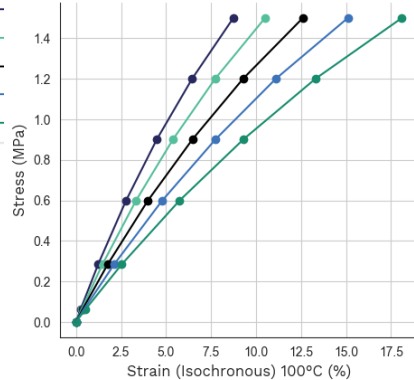
Specific volume-temperature (pvT)
Pebax® 4033 SP 01



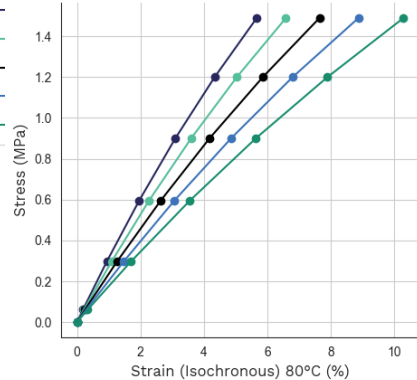
Stress-strain (Isochronous) 23°C
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Stress-strain (Isochronous) 100°C
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Stress-strain (Isochronous) 80°C
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