

## TECHNICAL DATA SHEET

# PEBAX® 3533 SA 01

## POLYETHER BLOCK AMIDE PELLET

PEBAX® 3533 SA 01 is a polyether block amide, a thermoplastic elastomer made of flexible polyether and rigid polyamide. This SA grade offers the highest quality. It is used in sport and consumer applications, especially when food contact compliance is requested.

### TYPE

PEBA

### MAIN APPLICATIONS

- Footwear - Outsole/Components
- Footwear - Insole/Midsole/Foam
- Industry - Distribution

### DELIVERY FORM

- Pellets

### TRANSFORMATION PROCESSES

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

## RHEOLOGICAL PROPERTIES

| PROPERTIES                  | VALUE | UNIT | TEST STANDARD |
|-----------------------------|-------|------|---------------|
| Shrinkage, Parallel (t+24h) | 0.2   | %    | ISO 294-4     |
| Shrinkage, Normal (t+24h)   | 1.2   | %    | ISO 294-4     |

## MECHANICAL PROPERTIES

| PROPERTIES                                      | DRY / COND VALUE*   | UNIT            | TEST STANDARD |
|-------------------------------------------------|---------------------|-----------------|---------------|
| Hardness, Shore A, 15 s                         | - / 80              |                 | ISO 868       |
| Hardness, Shore D, 15 s                         | - / 25              |                 | 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    | 4 / 4               | MPa             | ISO 527-1/-2  |
| Tensile modulus, 23°C (73°F), 1 mm/min          | 19 / 18             | MPa             | ISO 527-1/-2  |
| Flexural modulus, 23°C (73°F)                   | - / 21              | MPa             | ISO 178       |
| Stress at break, 23°C (73°F), 50 mm/min         | - / 39              | MPa             | ISO 527-1/-2  |
| Nominal strain at break, 23°C (73°F), 50 mm/min | > 600 / > 600       | %               | ISO 527-1/-2  |
| Taber abrasion                                  | 64 / -              | mm <sup>3</sup> | ISO 4649      |

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

## THERMAL PROPERTIES

| PROPERTIES                             | VALUE | UNIT | TEST STANDARD  |
|----------------------------------------|-------|------|----------------|
| Melting temperature, 10°C/min          | 144   | °C   | ISO 11357-1/-3 |
| Glass transition temperature, 10°C/min | -65   | °C   | ISO 11357-1/-2 |

# PEBAX® 3533 SA 01

## ELECTRICAL PROPERTIES

| PROPERTIES                                     | DRY / COND VALUE* | UNIT   | TEST STANDARD |
|------------------------------------------------|-------------------|--------|---------------|
| Surface resistivity, 23°C (73°F)               | - / 3.0E+12       | Ohm/sq | IEC 62631-3-2 |
| Volumic (transversal) resistivity, 23°C (73°F) | - / 3.2E+10       | Ohm.m  | IEC 62631-3-1 |
| Comparative tracking index, 23°C (73°F)        | - / 600           |        | IEC 60112     |
| Dielectric stress, 23°C (73°F)                 | - / 33.5          | kV/mm  | IEC 60243-1   |
| Relative permittivity, 100Hz                   | - / 6             |        | IEC 62631-2-1 |
| Relative permittivity, 1Mhz                    | - / 6             |        | IEC 62631-2-1 |
| Dissipation factor, 100Hz                      | 310 / -           | E-4    | IEC 62631-2-1 |
| Dissipation factor, 1Mhz                       | 434 / -           | E-4    | IEC 62631-2-1 |

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

## OTHER PROPERTIES

| PROPERTIES                                                 | VALUE | UNIT              | TEST STANDARD |
|------------------------------------------------------------|-------|-------------------|---------------|
| Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR | 0.4   | %                 | ISO 62        |
| Water absorption, 23°C (73°F), immersion, equilibrium      | 1.2   | %                 | ISO 62        |
| Specific gravity, 23°C (73°F)                              | 1     | g/cm <sup>3</sup> | ISO 1183-1    |

## PACKAGING

Available packaging:

- 25 kg / 55 lb bags

## 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: 180°C / 210°C / 240°C (355°F / 410°F / 465°F)
- Typical mold temperature - Injection molding: 10-30°C (50-90°F)
- Drying time and temperature: 55-65°C (130-150°F) / 4-8 hours

## REGIONAL AVAILABILITY

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