PEBAX®

TECHNICAL DATA SHEET

PEBAX® 4533 SA 01

POLYETHER BLOCK AMIDE PELLET

PEBAX® 4533 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

POTENTIAL APPLICATIONS

- Chemical & plastic distribution
- Footwear

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

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

RHEOLOGICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Shrinkage, parallel (t+24h)	0.6	%	ISO 294-4
Shrinkage, normal (t+24h)	1.1	%	ISO 294-4

MECHANICAL PROPERTIES

PROPERTIES	TYPICAL VALUE*	UNIT	TEST STANDARD
Flexural modulus, 23°C (73°F)	- / 86	MPa	ISO 178
Tensile modulus, 23°C (73°F)	88 / 81	MPa	ISO 527-1/-2
Stress at 50% strain, 23°C (73°F)	- / 9	MPa	ISO 527-1/-2
Stress at break, 23°C (73°F)	- / 42	MPa	ISO 527-1/-2
Nominal strain at break, 23°C (73°F)	> 550 / > 550	%	ISO 527-1/-2
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, 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
Hardness, shore A, instantaneous	- / 92		ISO 868
Hardness, shore A, 15 s	- / 90		ISO 868
Hardness, shore D, instantaneous	- / 46		ISO 868
Hardness, shore D, 15 s	- / 41		ISO 868
Compression set	37 / -	%	ISO 815
Abrasion resistance	40 / -	mm^3	ISO 4649

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

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THERMAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Melting temperature, 10°C/min	147	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	-55	°C	ISO 11357-1/-2

ELECTRICAL PROPERTIES

PROPERTIES	TYPICAL VALUE*	UNIT	TEST STANDARD
Surface resistivity, 23°C (73,4°F)	- / 4E+12	ohm/sq	IEC 62631-3-2
Volumic (transversal) resistivity, 23°C (73,4°F)	- / 6E+09	ohm.m	IEC 62631-3-1
Comparative tracking index, 23°C (73,4°F)	- / 600		IEC 60112
Relative permittivity, 100Hz	- / 9		IEC 62631-2-1
Relative permittivity, 1Mhz	- / 6		IEC 62631-2-1
Dissipation factor, 100Hz	2090 / -	E-4	IEC 62631-2-1
Dissipation factor, 1Mhz	1120 / -	E-4	IEC 62631-2-1
Dielectric Strength, 23°C (73,4°F)	- / 43	kV/mm	IEC 60243-1

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OTHER PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Water absorption, at equilibrium at 23°C (73°F) / 50%RH	0.4	%	ISO 62
Density, 23°C (73°F)	1.01	g/cm³	ISO 1183-1
Water absorption, at equilibrium at 23°C (73°F) / Immersion	1.2	%	ISO 62

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 RECOMMENDATIONS

Please refer to specific grade's processing guidelines.

- 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 Conditions (only for bags opened for more than 2 hours): 60-70°C (140-160°F) / 4-8 hours

REGIONAL AVAILABILITY

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

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