Product Information

VESTAMID® E62-S3

HEAT- AND LIGHT-STABILIZED COMPOUND BASED ON POLYAMIDE 12 ELASTOMER FOR MOLDING OF SPORT SHOE SOLES

VESTAMID® E62-S3 is a PA 12 elastomer consisting of PA 12 segments and softening segments. The material is free of volatile or migrating plasticizer.

The VESTAMID® E represent thermoplastic elastomers generically characterized as polyether block copolyamides (PEBA) consisting of PA 12 and polyether segments.

VESTAMID® E62-S3 is especially developed for sport shoe soles. It has good impact strength at low temperatures.

VESTAMID® E62-S3 is supplied as spherical pellets in moisture-proof packaging, ready for processing.

The process temperatures should be within a range of 190°C – 230°C.

Pigmentation may affect values.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at temperatures not exceeding 30°C.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM
OR VISIT OUR PRODUCT AT WWW.VESTAMID.COM

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile Modulus	**370 / 365**	MPa	ISO 527
Tensile Strength	**23 / 24**	MPa	ISO 527
Yield stress	**23 / 24**	MPa	ISO 527
Yield strain	**30 / 26**	%	ISO 527
Stress at 50% strain	**23 / 23**	MPa	ISO 527
Stress at break	**40 / 40**	MPa	ISO 527
Nominal strain at break, εtB	**300 / 300**	%	ISO 527
Charpy impact strength, +23°C	**N / N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**N / N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**120 / 112**	kJ/m²	ISO 179/1eA

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Type of failure	**P / P**	-	-
Charpy notched impact strength, -30°C	**8 / 11**	kJ/m²	ISO 179/1eA
Type of failure	**C / C**	-	-
Tensile-impact strength, notched, atN +23°C	**230 / -**	kJ/m²	ISO 8256/1
Flexural modulus, 23°C	**366 / 345**	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	**13 / 13**	MPa	ISO 178
Flexural strain at flexural strength, 23°C	**9 / 9**	%	ISO 178
Flexural stress at break, 23°C	**N / N**	MPa	ISO 178
Flexural strain at break, 23°C	**N / N**	%	ISO 178

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	**172 / ***	°C	ISO 11357-1/-3
Glass transition temperature	**10 / ***	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	**45 / ***	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**100 / ***	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	**165 / ***	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	**110 / ***	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	**200 / ***	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, normal	**200 / ***	E-6/K	ISO 11359-1/-2

Physical properties	dry / cond	Unit	Test Standard
Water absorption	**1.1 / ***	%	Sim. to ISO 62
Humidity absorption	**0.5 / ***	%	Sim. to ISO 62
Density	**1030 / -**	kg/m³	ISO 1183
Shore D hardness	**62**[b] **/ -**	-	ISO 7619-1
Compression Set under constant strain, 23°C	**34 / -**	%	ISO 815
Compression Set under constant strain, 70°C	**48 / -**	%	ISO 815
Compression Set under constant strain, 100°C	**85 / -**	%	ISO 815

b: 3 seconds

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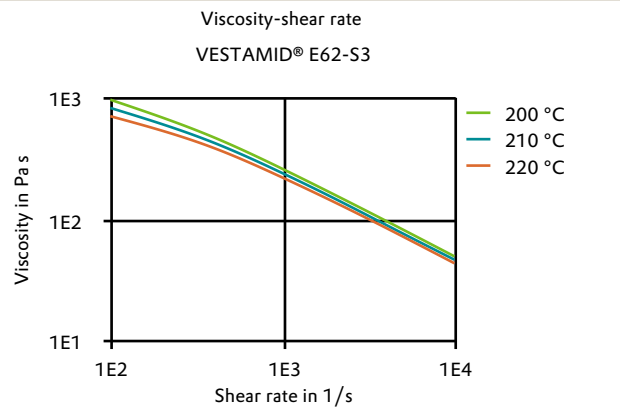
Burning Behav.	dry / cond	Unit	Test Standard
Burning behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.6 / ***	mm	-

Electrical properties	dry / cond	Unit	Test Standard
Relative permittivity, 100Hz	**9 / -**	-	IEC 62631-2-1
Relative permittivity, 1MHz	**4 / -**	-	IEC 62631-2-1
Dissipation factor, 100Hz	**1000 / -**	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	**1200 / -**	E-4	IEC 62631-2-1
Volume resistivity, ρV	**2E10 / 2.5E9**	Ohm*m	IEC 62631-3-1
Surface resistivity, σC, circular electrodes	**- / 3E13**	Ohm per square	IEC 62631-3-2
Electric strength, AC, S20/S20	**39 / 35**	kV/mm	IEC 60243-1

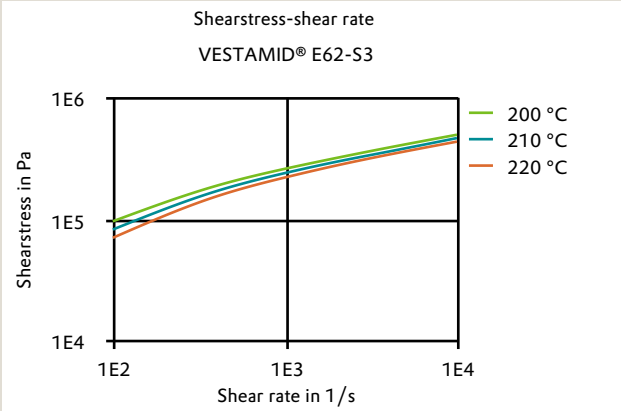
Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	**20 / ***	cm^3/10min	ISO 1133
Temperature	**240 / ***	°C	-
Load	**2.16 / ***	kg	-
Molding shrinkage, parallel	**0.8 / ***	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.4 / ***	%	ISO 294-4, 2577
Mold temperature	**35 / ***	°C	-
Melt temperature	**200 / ***	°C	-

Diagrams

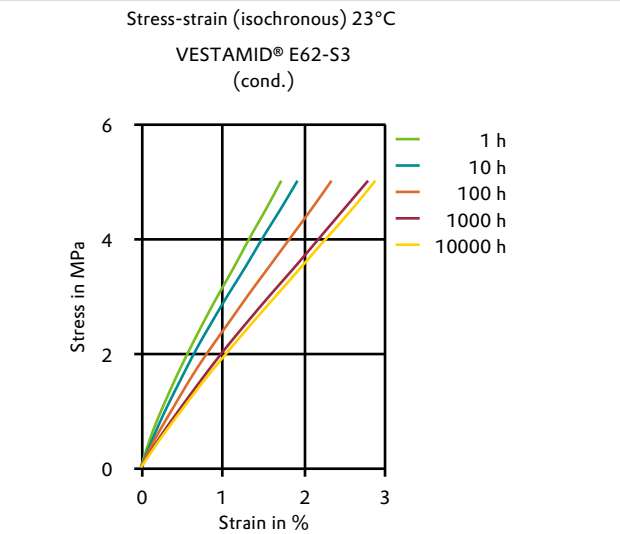
Viscosity-shear rate



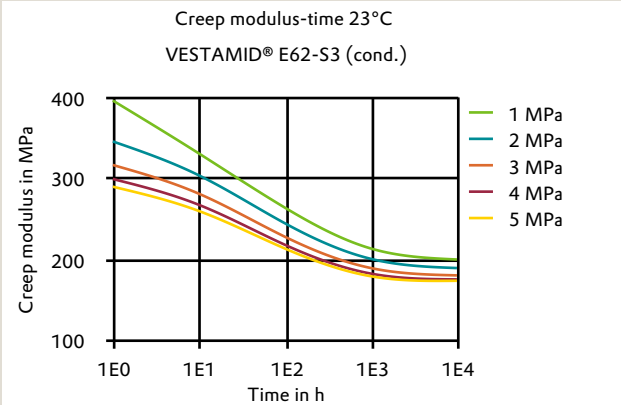
Shearstress-shear rate



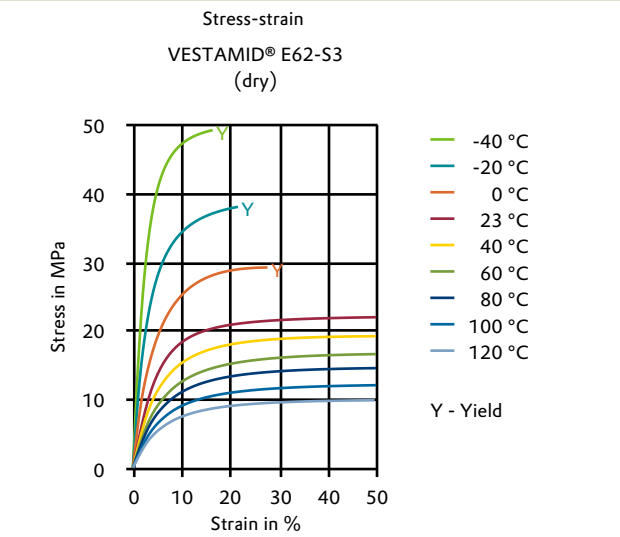
Stress-strain (isochronous) 23°C



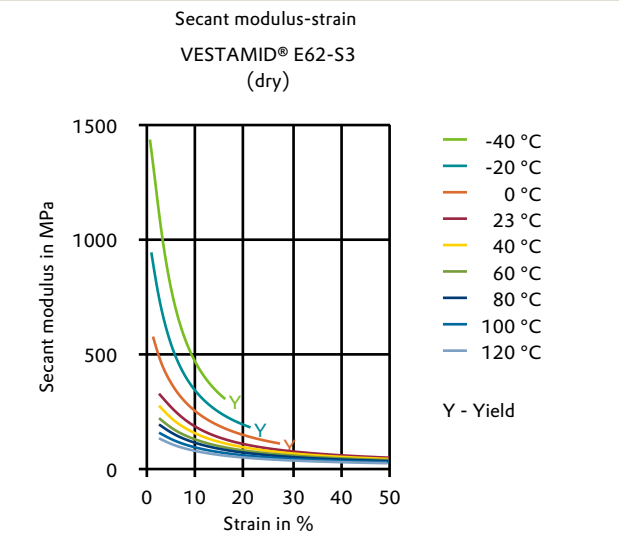
Creep modulus-time 23°C



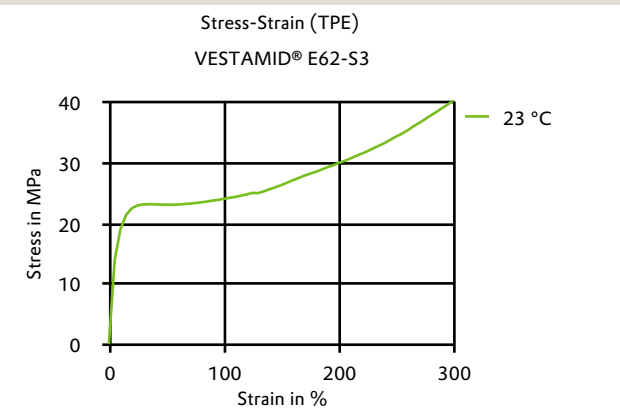
Stress-strain



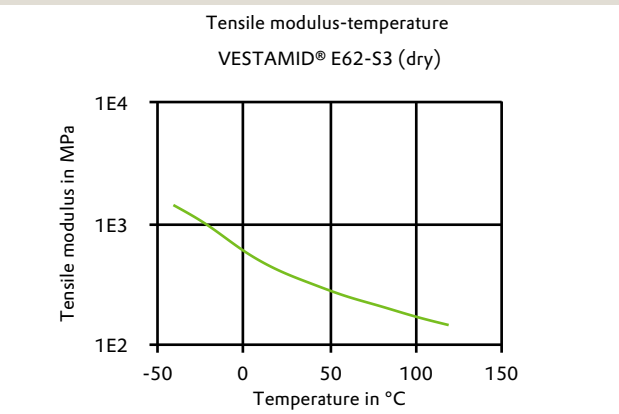
Secant modulus-strain



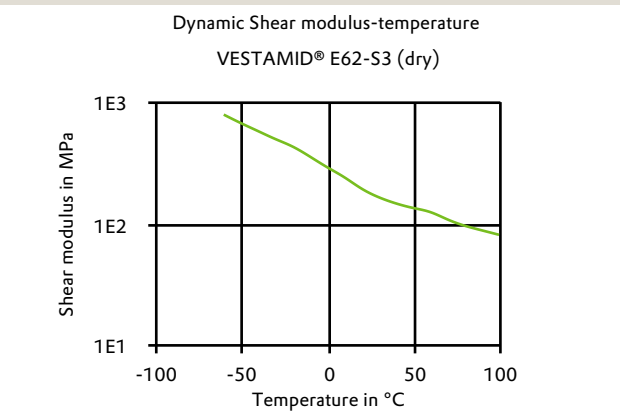
Stress-Strain (TPE)



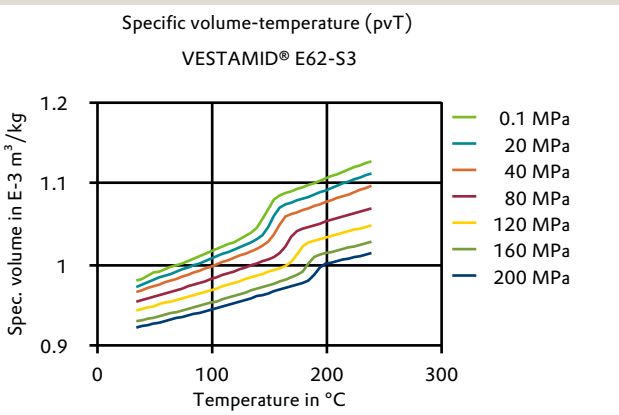
Tensile modulus-temperature



Dynamic Shear modulus-temperature



Specific volume-temperature (pvT)



Characteristics

Key Feature, Industrial Sector
Automotive, Instustry and Building Construction, Sports and Lifestyle

Key Feature, Processing
Injection Molding, Extrusion

Key Feature, Optics
Translucent

Key Feature, Resistance to
Heat (Thermal Stability), Hydrolysis / Hot water, U.V. / Light / Weathering, Wear / Abrasion, Fatigue Resistance, Oil / Fuels

Key Feature, Electrical
Isolating

Key Feature, Certificate / Licence
Automotive

Key Feature, Additives
Unfilled

Processing
Profile Extrusion

Special Characteristics
Light-stabilized, U.V. stabilized, Heat-stabilized

Color
Natural Color

Additives
Light stabilizer, Heat stabilizer

Delivery form
Pellets, Granules

Chemical Media Resistance

Acids

- ✔ Acetic Acid (5% by mass) (23°C)
- ✔ Citric Acid solution (10% by mass) (23°C)

Bases

- ✔ Sodium Hydroxide solution (35% by mass) (23°C)
- ✔ Sodium Hydroxide solution (1% by mass) (23°C)
- ✔ Ammonium Hydroxide solution (10% by mass) (23°C)

Alcohols

- ✔ Isopropyl alcohol (23°C)
- ✔ Methanol (23°C)
- ✔ Ethanol (23°C)

Hydrocarbons

- ✔ n-Hexane (23°C)
- ✔ Toluene (23°C)
- ✔ iso-Octane (23°C)

Ketones

- ✔ Acetone (23°C)

Ethers

- ✔ Diethyl ether (23°C)

Salt solutions

- ✔ Sodium Chloride solution (10% by mass) (23°C)
- ✔ Sodium Carbonate solution (20% by mass) (23°C)
- ✔ Sodium Carbonate solution (2% by mass) (23°C)

Other

- ✔ Ethyl Acetate (23°C)
- ✔ Hydrogen peroxide (23°C)
- ✔ Water (23°C)

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