VESTAMID® E55-S3

TPA | Evonik Operations GmbH

Product Texts

Heat- and light-stabilized compound based on polyamide 12 elastomer for molding of sport shoe soles

VESTAMID® E55-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® E55-S3 is especially developed for sport shoe soles. It has good impact strength at low temperatures.

VESTAMID® E55-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 information about processing of VESTAMID®, please follow the general commendations about "Processing of VESTAMID® compounds".
The values presented are typical or average values, they do not constitute a specification.

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

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**36 / ***	cm³/10min	ISO 1133
Temperature	**240 / ***	°C	-
Load	**2.16 / ***	kg	-
[C] Molding shrinkage, parallel	**0.8 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.3 / ***	%	ISO 294-4, 2577
[C] Ejection temperature	**160**	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**215 / -**	MPa	ISO 527
[C] Tensile creep modulus, 1000h	*** / 100**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**N / -**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**N / -**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**N / -**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**22 / -**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / -**	-	-
[C] Tensile notched impact strength, +23°C	**210 / -**	kJ/m²	ISO 8256/1
[C] Stress at 10% elongation	**12.5 / ***	MPa	ISO 527
[C] Stress at 100% elongation	**18 / ***	MPa	ISO 527
[C] Stress at 300% elongation	**30 / ***	MPa	ISO 527
[C] Strain at break TPE	**>300 / ***	%	ISO 527
[C] Shore D hardness	**55 / ***	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**166 / ***	°C	ISO 11357-1/-3
[C] Glass transition temperature, 10°C/min	**-20 / ***	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**45 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**90 / ***	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**100 / ***	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**200 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**200 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.6 / ***	mm	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**9.5 / -**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**4.3 / -**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**950 / -**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**1100 / -**	E-4	IEC 62631-2-1
[C] Volume resistivity	**3E9 / -**	Ohm*m	IEC 62631-3-1

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	**1.1 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**0.5 / ***	%	Sim. to ISO 62
[C] Density	**1030 / -**	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] Injection Molding, melt temperature	**220**	°C	ISO 294
Injection Molding, mold temperature	**35**	°C	ISO 294
Injection Molding, injection velocity	**200**	mm/s	ISO 294
Injection Molding, pressure at hold	**70**	MPa	ISO 294

[C]: CAMPUS

Characteristics

Processing
Injection Molding, Profile Extrusion, Other Extrusion

Delivery form
Pellets

Special Characteristics
Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

Applications
Sports Equipment

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa