

VESTAMID® E E58-S4

Polyamide 12
Evonik Industries AG

Message:

Typical Applications: specialty grade for transparent sports shoe soles
PA 12 elastomers, the most important subgroup of polyamide elastomers, belong to the increasingly important material class of thermoplastic elastomers (TPE). Because of their excellent properties, they are indispensable in many applications.
PA 12 elastomers are block copolymers consisting of PA 12 segments and polyether segments. PA 12-rich products have the major properties of PA 12, while the elastomer characteristics become more apparent with increasing polyether content. That is the polymers become more flexible, with higher impact strength at cold temperatures.

General Information	
Additive	Heat Stabilizer
	UV Stabilizer
Features	Block Copolymer
	Excellent Printability
	Good Chemical Resistance
	Good Colorability
	Good Processability
	Heat Stabilized
	High Elasticity
	Light Stabilized
	Low Density
	Low Temperature Impact Resistance
	Solvent Resistant
Uses	Footwear
	Sporting Goods
Appearance	Clear/Transparent
Forms	Granules
Processing Method	Extrusion
	Injection Molding

Physical	Nominal Value	Unit	Test Method
Density	1.02	g/cm³	ISO 1183
Viscosity Number	180	cm³/g	ISO 307
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	58		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	185	MPa	ISO 527-2

Tensile Stress	39.0	MPa	ISO 527-2
Tensile Strain (Break)	> 200	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	5.0	kJ/m ²	
23°C	No Break		
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	55.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	35.0	°C	ISO 75-2/A
Flammability	Nominal Value		Test Method
Flame Rating (1.60 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Suggested Max Moisture	0.10	%	
Processing (Melt) Temp	190 to 230	°C	
Mold Temperature	20.0 to 40.0	°C	
Extrusion	Nominal Value	Unit	
Suggested Max Moisture	0.10	%	
Melt Temperature	190 to 230	°C	

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