EVONIK INDUSTRIES

Product Information

VESTORAN® 1900

Modified polyphenylene ether (PPE), high heat resistant, suitable for plastic/rubber composites manufactured by the K&K process

VESTORAN is the registered trademark of Evonik Degussa GmbH for molding compounds containing poly-2,6-dimethyl-1,4-phenylene ether as polymeric constituent (poly-phenylene ether, PPE, also referred to as PPO).

As a material of amorphous structure VESTORAN 1900 shows very small mold shrinkage. Therefore molded parts have a very low tendency to warp.

The impact modified compound is of low density and easy to process. Further properties are excellent impact strength, heat deflection under load and suitability for being coated with lacquers.

Moldings of VESTORAN 1900 are dimensionally stable and hydrolysis resistant even in hot water, but are more sensitive to organic solvents than semi-crystalline plastics.

VESTORAN 1900 is resistant to aqueous alkalines and acides, certain alcohols, and glycol solutions.

Colored material contains only cadmium-free pigments.

VESTORAN 1900 is particularly suitable for the adhesion promoter-free manufacturing of plastic/ rubber composites by the Evonik Degussa GmbH-patented K&K process.

VESTORAN 1900 is supplied as cylindrical granules in polyethylene packaging.

Processing advice is given in a separate product information.

Property		Test method international	Test method national	Unit	VESTORAN 1900
Density	23°C	ISO 1183	DIN EN ISO 1183	g/cm³	1.04
Tensile test		ISO 527-1	DIN EN ISO 527-1		
Stress at yield		ISO 527-2	DIN EN ISO 527-2	MPa	60
Strain at yield				%	6
Strain at break				%	approx. 50
Tensile modulus		ISO 527-1 ISO 527-2	DIN EN ISO 527-1 DIN EN ISO 527-2	MPa	2000
Flexural modulus		ISO 178	DIN EN ISO 178	MPa	2400
CHARPY impact strength		ISO 179/1eU	DIN EN ISO 179/1eU		
	23°C			kJ/m²	250 P[1)]
CHARPY notched impact strength		ISO 179/1eA	DIN EN ISO 179/1eA		
	23°C			kJ/m²	25 C[1)]
Temperature of deflection		ISO 75-1	DIN EN ISO 75-1		
under load		ISO 75-2	DIN EN ISO 75-2		
Method A	1.8 MPa			°C	170
Method B	0.45 MPa			°C	190
Vicat softening temperature		ISO 306	DIN EN ISO 306		
Method A	10 N			°C	190
Method B	50 N			°C	185
Relative permittivity		IEC 60250	DIN VDE 0303-T4		
	100 Hz				2.6
	1 MHz				2.9
Dissipation factor		IEC 60250	DIN VDE 0303-T4		
	100 Hz			10^{-4}	80
	1 MHz			10^{-4}	160
Electric strength	K20/P50	IEC 60243-1	IEC 60243-1	kV/mm	40
Comparative tracking index		IEC 60112	IEC 60112		
Test solution A	CTI				225
	100 drops value				200
Volume resistivity		IEC 60093	IEC 60093	Ohm · cm	10^{13}
Surface resistance R_{OA}		IEC 60093	IEC 60093	Ohm	10^{14}
Electrolytic corrosion		IEC 60426	DIN 53489 DIN VDE 0303-T6	Step	A1
Melt volume-flow rate (MVR)		ISO 1133	DIN EN ISO 1133		
	300°C/21.6kg			cm³/10 min	approx. 40
Flammability acc. UL94		IEC 60695	UL94		
	0.8 mm				HB
	1.6 mm				HB
Mold shrinkage		determined on 2 mm sheets			
	in flow direction	with film gate at rim		%	approx. 0.9
	in transverse direction	mold temperature 80°C, ISO294-4		%	approx. 0.8

Pigmentation may affect values.

1) C = Complete break, incl. hinge break H
P = Partial break

® = registered trademark

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