



Product Information

VESTORAN® 1900GF20

Modified polyphenylene ether (PPE), heat resistant, glass fiber-reinforced, 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 (polyphenylene ether, PPE, also referred to as PPO).

As a material of amorphous structure VESTORAN 1900GF20 shows very small mold shrinkage. Therefore molded parts have a very low tendency to warp.

Moldings of VESTORAN 1900GF20 are dimensionally stable and hydrolysis resistant even in hot water, but are more sensitive to organic solvents than semi-crystalline plastics. VESTORAN 1900GF20 is resistant to aqueous alkalines and acids, certain alcohols, and glycol solutions.

Glass fiber reinforcement of this molding material combines outstanding heat deflection temperature under load with high strength and rigidity.

The even smaller shrinkage compared to non-reinforced VESTORAN depends on the orientation of the glass fibers in the molded parts.

VESTORAN 1900GF20 is particularly suitable for the adhesion promoter-free manufacturing of plastic/rubber composites by the Evonik Degussa GmbH-patented K&K process.

Compared to VESTORAN 1900, VESTORAN 1900GF20 offers higher rigidity and strength.

Colored material contains only cadmium-free pigments.

VESTORAN 1900GF20 is supplied as cylindrical granules in polyethylene packaging.

Processing advice is given in a separate product information.

Property	Test method		Unit	VESTORAN 1900GF20	
	international	national			
Density	23°C	ISO 1183	DIN EN ISO 1183	g/cm ³	1.19
Tensile test		ISO 527-1	DIN EN ISO 527-1		
Tensile strength		ISO 527-2	DIN EN ISO 527-2	MPa	110
Strain at break				%	3
Relative weld line strength		following ISO 527-1	following DIN EN ISO 527-1	%	60
		ISO 527-2	DIN EN ISO 527-2		
Tensile modulus		ISO 527-1	DIN EN ISO 527-1	MPa	5600
		ISO 527-2	DIN EN ISO 527-2		
Flexural modulus		ISO 178	DIN EN ISO 178	MPa	5700
CHARPY impact strength		ISO 179/1eU	DIN EN ISO 179/1eU		
	23°C			kJ/m ²	50 C ¹⁾
	0°C			kJ/m ²	50 C ¹⁾
	-20°C			kJ/m ²	50 C ¹⁾
CHARPY notched impact strength		ISO 179/1eA	DIN EN ISO 179/1eA		
	23°C			kJ/m ²	12 C ¹⁾
	0°C			kJ/m ²	12 C ¹⁾
	-20°C			kJ/m ²	12 C ¹⁾
Temperature of deflection under load		ISO 75-1	DIN EN ISO 75-1		
		ISO 75-2	DIN EN ISO 75-2		
Method A	1.8 MPa			°C	185
Method B	0.45 MPa			°C	190
Vicat softening temperature		ISO 306	DIN EN ISO 306		
Method A	10 N			°C	200
Method B	50 N			°C	190
Relative permittivity	100 Hz	IEC 60250	DIN VDE 0303-T4		2.9
	1 MHz				2.7
Dissipation factor	100 Hz	IEC 60250	DIN VDE 0303-T4	10 ⁻⁴	80
	1 MHz			10 ⁻⁴	180
Electric strength	K20/P50	IEC 60243-1	IEC 60243-1	kV/mm	33
Comparative tracking index		IEC 60112	IEC 60112		
Test solution A	CTI				200
	100 drops value				175
Volume resistivity		IEC 60093	IEC 60093	Ohm · cm	10 ¹³
Surface resistance R _{0A}		IEC 60093	IEC 60093	Ohm	10 ¹³
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			cm ³ /10 min	15
Flammability acc. UL94	0.8 mm	IEC 60695	UL94		HB
	1.6 mm				HB
Oxygen index		ISO 4589	ASTM D 2863	%	29
Mold shrinkage		determined on 2 mm sheets			
	in flow direction	with film gate at rim		%	approx. 0.5
	in transverse direction	mold temperature 80°C, ISO294-4		%	approx. 0.6

Pigmentation may affect values.

® = registered trademark

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