

VESTAKEEP® L4000G

Polyetheretherketone

Evonik Industries AG

Message:

High-viscosity, unreinforced polyether ether ketone

VESTAKEEP L4000G is a high-viscosity, unreinforced lubricated polyether ether ketone for injection molding and extrusion.

The semi-crystalline polymer features superior thermal and chemical resistance. Parts made from VESTAKEEP L4000G are self extinguishing.

VESTAKEEP L4000G can be processed by common machines for thermoplastics.

The additional lubrication agent improves the feeding process.

We recommend a melt temperature between 370°C and 380°C during the injection molding process. The mold temperature should be within a range of 160°C to 200°C, preferably 180°C.

General Information			
UL YellowCard	E100203-100947906		
Additive	Lubricant		
Features	Good Chemical Resistance		
	High Viscosity		
	Lubricated		
	Self Extinguishing		
	Semi Crystalline		
Forms	Granules		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.30	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (380°C/5.0 kg)	12.0	cm ³ /10min	ISO 1133
Molding Shrinkage ¹			ISO 294-4
Across Flow : 180°C, 2.00 mm	1.1	%	
Flow : 180°C, 2.00 mm	0.90	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3500	MPa	ISO 527-2
Tensile Stress (Yield)	96.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	5.0	%	
Break	30	%	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	6.0	kJ/m ²	
23°C, Complete Break	7.0	kJ/m ²	

Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature			
--	335	°C	ISO 306/A
--	305	°C	ISO 306/B
Melting Temperature ²	340	°C	ISO 11357-3
CLTE - Flow (23 to 55°C)	6.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Electric Strength ³	16	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.80		
1 MHz	2.80		
Comparative Tracking Index			IEC 60112
Solution A ⁴	175	V	
Solution A	200	V	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.20 mm)	V-0		UL 94
Glow Wire Flammability Index (2.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (2.00 mm)	825	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Processing (Melt) Temp	370 to 380	°C	
Mold Temperature	160 to 200	°C	
NOTE			
1.	determined on 2 mm sheets with film gate at rim mold temperature 180°C		
2.	2nd heating		
3.	K20/P50		
4.	100 drops value		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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