

VESTAKEEP® 5000 G

PEEK

Evonik Operations GmbH

High viscosity, unreinforced polyether ether ketone

VESTAKEEP® 5000 G is a high viscosity, unreinforced polyether ether ketone for injection molding and extrusion.

The semi-crystalline polymer features superior, thermal and chemical resistance. Parts made from VESTAKEEP® 5000 G are of low flammability.

VESTAKEEP® 5000 G can be processed by common machines for thermoplastics. 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.

VESTAKEEP® 5000 G is supplied as granules in 25 kg boxes with moisture-proof polyethylene liners.

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.

Pigmentation may affect values.

The results shown have been generated from a low number of production lots. Therefore, they are preliminary and not yet the result of a statistical evaluation. Therefore they must not be used to establish specifications.

The values presented are typical or average values, they do not constitute a specification.

流变性能	数值	单位	试验方法
ISO数据			
熔体体积流动速度, MVR	7	cm³/10min	ISO 1133
温度	380	°C	-
载荷	5	kg	-
模塑收缩率, 平行	0.9	%	ISO 294-4, 2577
模塑收缩率, 垂直	1.1	%	ISO 294-4, 2577

机械性能	数值	单位	试验方法
ISO数据			
拉伸模量	3500	MPa	ISO 527
屈服应力	95	MPa	ISO 527
屈服伸长率	5	%	ISO 527
名义断裂伸长率	35	%	ISO 527
无缺口简支梁冲击强度, +23°C	无断裂	kJ/m²	ISO 179/1eU
无缺口简支梁冲击强度, -30°C	无断裂	kJ/m²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	9	kJ/m²	ISO 179/1eA
Type of failure	C	-	-
简支梁缺口冲击强度, -30°C	8	kJ/m²	ISO 179/1eA
Type of failure	C	-	-

热性能	数值	单位	试验方法
ISO数据			
熔融温度, 10°C/min	340	°C	ISO 11357-1/-3
玻璃化转变温度 (10°C/min)	152	°C	ISO 11357-1/-2
热变形温度, 1.80 MPa	150	°C	ISO 75-1/-2
热变形温度, 0.45 MPa	205	°C	ISO 75-1/-2
维卡软化温度, 50°C/h 50N	305	°C	ISO 306
线性热膨胀系数, 平行	60	E-6/K	ISO 11359-1/-2
燃烧性 - 氧指数	36	%	ISO 4589-1/-2

电性能	数值	单位	试验方法
ISO数据			
相对介电常数, 1MHz	2.8	-	IEC 62631-2-1
体积电阻率	>1E13	Ohm*m	IEC 62631-3-1
介电强度	32.9	kV/mm	IEC 60243-1
相对漏电起痕指数	200	-	IEC 60112

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其它性能	数值	单位	试验方法
ISO数据			
吸水性	0.5	%	类似ISO 62
吸湿性	0.12	%	类似ISO 62
密度	1300	kg/m³	ISO 1183

试样制备条件	数值	单位	试验方法
ISO数据			
注塑, 熔体温度	380	°C	ISO 294
注塑, 模具温度	180	°C	ISO 294
注塑, 注射速度	200	mm/s	ISO 294

特征

加工方法	特征
注塑, 其它挤出成型	热稳定性
供货形式	耐化学试剂
粒料	通用耐化学性