

PEARLCOAT® 168K

Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

Message:

PEARLCOAT® 168K is a polyether-based TPU, supplied in form of translucent, colourless pellets, offering adequate hardness, excellent low-temperature flexibility and very good hydrolysis resistance.

PEARLCOAT® D168K is used in melt coatings on textile substrates, for end-uses in industrial coatings (for life-jackets, etc.) obtained by extrusion and calendering.

General Information			
Features	Flexibility at low temperatures		
	Hydrolysis resistance		
	Medium hardness		
Uses	Textile applications		
	Floating Equipment		
	Coating application		
Agency Ratings	EC 1907/2006 (REACH)		
	FDA 21 CFR 177.2600		
Appearance	Translucent		
	Colorless		
Forms	Particle		
Processing Method	Extrusion		
	Calendering		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.11	g/cm ³	ASTM D792, DIN 53479
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A)	82		ASTM D2240, DIN 53505
Mechanical	Nominal Value	Unit	Test Method
Abrasion Loss	25.0	mm ³	DIN 53516
Extruder Screw L/D Ratio	25:1		
Extruder Screw Compression Ratio	3:1		
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			
100% strain	5.00	MPa	ASTM D412, DIN 53504
300% strain	7.52	MPa	ASTM D412
300% strain	7.50	MPa	DIN 53504

Tensile Strength (Yield)	25.0	MPa	ASTM D412, DIN 53504
Tensile Elongation (Break)	650	%	ASTM D412, DIN 53504
Tear Strength ¹			
--	75.3	kN/m	ASTM D624
--	75.0	kN/m	DIN 53515
Compression Set			
23°C, 70 hr	25	%	DIN 53504
70°C, 24 hr	35	%	DIN 53504
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-49.0	°C	DIN 51007
Melting Temperature ²	150 - 160	°C	Internal method
Extrusion	Nominal Value	Unit	
Drying Temperature	98.9 - 110	°C	
Drying Time	2.0	hr	
Cylinder Zone 1 Temp.	150 - 160	°C	
Cylinder Zone 2 Temp.	160 - 170	°C	
Cylinder Zone 3 Temp.	170 - 180	°C	
Cylinder Zone 4 Temp.	175 - 185	°C	
Die Temperature	175 - 185	°C	
Extrusion instructions			
Cooling: AirSpeed: 50 rpmThickness Die: 0.2 mm			
NOTE			
1.	C mould		
2.	Temperature at which MFI = 10 g/10 min @ 21.6 kg		

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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

