



Oxford Performance Materials

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High Performance Thermoplastic OXPEKK® Materials Unfilled and Reinforced Industrial Grades

PROPERTY	TEST METHOD	OXPEKK-SP	OXPEKK-C	OXPEKK-CE	OXPEKK-SP30G	OXPEKK-C30G	OXPEKK-C40G	OXPEKK-C30C	OXPEKK-C40C	OXPEKK-BG
		Amorphous	Crystalline Injection	Crystalline Extrusion	Superior Process	Crystalline	Crystalline	Crystalline	Crystalline	Bearing Grade
		Unfilled	Unfilled	Unfilled	30% Glass	30% Glass	40% Glass	30% Carbon Fiber	40% Carbon Fiber	
Color		Amber	Beige	Beige	Amber	Beige	Beige	Black	Black	Black
Linear Mold Shrinkage, in/in	ASTM D955	<0.005	0.014	0.014	0.002	0.003	0.002	0.001	0.0005	0.002
Specific Gravity, g/cm ³	ASTM D792	1.28	1.31	1.31	1.50	1.51	1.62	1.36	1.45	1.46
Water Absorption @ 24hr, %	ASTM D570	<0.20	<0.20	<0.20	0.10	<0.03	<0.03	<0.03	<0.03	<0.04
MECHANICAL										
Tensile Strength (Break), Kpsi	ASTM D638	13	16	16	26	27	29	36	47	25
Tensile Modulus, Mpsi	ASTM D638	0.5	0.64	0.64	1.6	1.8	2.9	4	7	1.8
Elongation (Break), %	ASTM D638	80	12	60	2.3	1.8	1.6	1.2	1.3	2
Flexural Strength @ 5% strain, Kpsi	ASTM D790	20	28	28	---	---	---	---	---	---
Flexural Strength, Kpsi	ASTM D790	---	---	---	35	37	42	56	65	36
Flexural Modulus, Mpsi	ASTM D790	0.49	0.66	0.66	1.6	1.6	2.1	3.5	4.5	1.8
Izod, Notched, ft-lb/in	ASTM D256	0.9	1	1.2	2	1.8	1.6	1.05	1.8	1.2
Compressive Strength, Kpsi	ASTM D695	15	30	30	---	32	---	---	---	32
Coefficient of Friction, Static	ASTM D1894	0.285	0.262	0.262	---	---	---	0.22	0.22	0.25
Hardness, Rockwell M	ASTM D785	86	88	88	---	103	---	---	---	90
THERMAL										
Tm-Melting Point, oF (°C)	DSC	577 (303)	680 (360)	680 (360)	577 (303)	680 (360)	680 (360)	680 (360)	680 (360)	680 (360)
Tg-Glass Transition, oF (°C)	DSC	310 (155)	325 (163)	325 (163)	310 (155)	325 (163)	325 (163)	325 (163)	325 (163)	325 (163)
Melt Flow, g/10min	ASTM D1638	35-45 (380C/8.4kg)	100-120 (400C/8.4kg)	20-30 (400C/8.4kg)	---	---	---	14-18 (400C/8.4kg)	10-12 (400C/8.4kg)	---
Flammability Rating	UL94	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-0
HDT @ 264 psi, oF (°C)	ASTM D648	286 (141)	347 (175)	347 (175)	---	610 (321)	619 (326)	610 (321)	621 (327)	>572 (300)
Thermal Conductivity, BTU-in/Hr-Ft ² F	ASTM C177	1.75	1.75	1.75	---	---	---	---	---	1.75
CTE (<Tg), 10-6/°F	ASTM D696	42.8	11.7	11.7	---	8.9	6.5	5.6	6	25
ELECTRICAL										
Dielectric Strength, V/mil	ASTM D149	600	600	600	---	---	---	---	---	---
Dielectric Constant @ 1KHz	ASTM D150	3.3	3.3	3.3	---	---	---	---	---	---
Volume Resistivity, ohm-cm	ASTM D257	1.0E+16	1.0E+16	1.0E+16	---	---	---	---	---	---
Surface Resistivity, ohm	ASTM D257	2.0E+16	2.0E+16	2.0E+16	---	---	---	---	---	---
Dissipation Factor @ 1KHz	ASTM D150	4.0E-03	4.0E-03	4.0E-03	---	---	---	---	---	---

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