



Oxford Performance Materials

30 South Satellite Road • South Windsor, CT 06074 USA • T: +1.860.698.9300 • F: +1.860.698.9978 • [www.oxfordpmm.com](http://www.oxfordpmm.com)

## High Performance Thermoplastic OXPEKK® Materials Medical Grades (MG) and Implant Grades (IG) – Unfilled

MEDICAL GRADE			OXPEKK-MG 100		OXPEKK-MG 200		OXPEKK-MG 300	
IMPLANT GRADE			OXPEKK-IG 100		OXPEKK-IG 200		OXPEKK-IG 300	
PROPERTIES	English Unit	Metric Unit	Amorphous Grade		Crystalline Injection Grade		Crystalline Extrusion Grade	
Form			Pellets		Pellets		Extruded Shapes	
Specific Gravity	lb/cb-ft	g/cm <sup>3</sup>	79.9	1.28	81.8	1.31	81.8	1.31
Linear Mold Shrinkage	in/in	%	<0.005	<0.5	0.014	1.4	0.014	1.4
Water Absorption @ 24 hrs	%	%	<0.2	<0.2	<0.20	<0.20	<0.20	<0.20
<b>MECHANICAL</b>								
Tensile Strength (Break)	Kpsi	MPa	13	89.6	16	110.3	16	110.3
Tensile Strength (Yield)	Kpsi	MPa	15	103	20	138	20	138
Tensile Modulus	Mpsi	GPa	0.5	3.45	0.55	3.8	0.64	4.41
Elongation (Break)	%	%	80+	80+	12	12	30+	30+
Elongation (Yield)	%	%	6	6	4	4	4.5	4.5
Flexural Strength @ 5% strain	Kpsi	MPa	20	137.9	28	193.1	28	193.1
Flexural Modulus	Mpsi	GPa	0.49	3.38	0.66	4.55	0.66	4.55
Izod, Notched	ft-lbf/in	J/m	0.9	48.0	1	53.4	1.2	64.1
Compressive Strength	Kpsi	MPa	15	103.4	30	206.8	30	206.8
Shear Strength	Kpsi	MPa	---	---	20	137.9	---	---
Hardness, Rockwell	M	M	86	86	88	88	88	88
<b>THERMAL</b>								
Melting Point	°F	°C	585	307	680	360	680	360
Glass Transition	°F	°C	310	155	325	163	325	163
Melt Index <sup>(1)</sup>	g/10min	g/10min	35-45	35-45	100-120	100-120	20-30	20-30
HDT @264 psi (1.8 MPa)	°F	°C	286	141	347	175	347	175
CTE (<T <sub>g</sub> )	10 <sup>-6</sup> /°F	10 <sup>-6</sup> /°C	42.8	77.0	11.7	21.1	11.7	21.1
<i>All numbers represent typical values</i>								
<sup>(1)</sup> Test Conditions: 380°C/8.4kg for OXPEKK-MG100 and 400°C/8.4kg for OXPEKK-MG/IG200 & OXPEKK-MG/IG300								

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