Material Specification

K11

Unfilled PEEK

Material Specification					
Created: AvE	Date: 6/23/2009	Revision: -	Released: Ron C	Material Code: K11	Description: Unfilled PEEK

1. Scope

This document describes property requirements for a material primarily used in bearing applications.

2. Specification

Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	3700	MPa	ISO 527-1/-2
Tensile Strength	100	MPa	ISO 527-1/-2
Stress at break	100	MPa	ISO 527-1/-2
Strain at break	45	%	ISO 527-1/-2
Charpy notched impact strength (+23°C)	7	kJ/m²	ISO 179/1eA
Flexural modulus (23°C)	4100	MPa	ISO 178
Izod Impact notched (23°C)	7.5	kJ/m²	ISO 180/1A
Izod Impact unnotched (23°C)	N	kJ/m²	ISO 180/1U
Shore D hardness (15s)	87	-	ISO 868

Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	343	°C	ISO 11357-1/-3
Glass transition temperature (10°C/min)	143	°C	ISO 11357-1/-2
Temp. of deflection under load (1.80 MPa)	152	°C	ISO 75-1/-2
Coefficient of linear therm. expansion (parallel)	45	E-6/K	ISO 11359-1/-2
Burning behavior @1.5 mm nom. thickness	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
Oxygen index	35	%	ISO 4589-1/-2

This material has been tested & meets the 21 CFR 177.2415 & Sanitary Standard 3-A for food and beverage applications. End users should note that it's the responsibility of the manufacturer of the food contact article to assure compliance of the extractive limitations of 21 CFR 177.2415

3. Test Parameters:

Tensile Modulus	ISO 527-1/-2
Yield stress	ISO 527-1/-2
Stress at break	ISO 527-1/-2
Strain at break	ISO 527-1/-2
Charpy notched impact strength (+23°C)	ISO 179/1eA
Flexural modulus (23°C)	ISO 178
Izod Impact notched (23°C)	ISO 180/1A
Izod Impact unnotched (23°C)	ISO 180/1U
Shore D hardness (15s)	ISO 868
Melting temperature (10°C/min)	ISO 11357-1/-3
Glass transition temperature (10°C/min)	ISO 11357-1/-2
Temp. of deflection under load (1.80 MPa)	ISO 75-1/-2
Coefficient. of linear therm. expansion (parallel)	ISO 11359-1/-2
Burning behavior at 1.5 mm nom. thickness.	IEC 60695-11-10
Thickness tested	IEC 60695-11-10
Oxygen index	ISO 4589-1/-2

4. Revisions -