

Arlon® 1163

Polyetheretherketone
Greene, Tweed & Co.

Message:

Arlon® 1163 is a Polyetheretherketone (PEEK) product filled with glass fiber. It can be processed by injection molding and is available in Europe or North America. Typical application: Military Applications.

General Information			
Filler / Reinforcement	Glass Fiber		
Agency Ratings	MIL P-46183 Type II, Class 3		
Appearance	Tan		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.53	g/cm ³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	107		ASTM D785
Durometer Hardness (Shore D)	90		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 0.5% Secant	11900	MPa	ASTM D638
Tensile Strength (Break)	186	MPa	ASTM D638
Tensile Elongation (Break)	2.4	%	ASTM D638
Flexural Modulus - 0.5% Secant	10300	MPa	ASTM D790
Flexural Strength	262	MPa	ASTM D790
Compressive Strength ¹	241	MPa	ASTM D695
Shear Strength			ASTM D732
-- ²	80.7	MPa	
-- ³	105	MPa	
Coefficient of Friction ⁴ (vs. Itself - Dynamic)	0.24		ASTM G77
Deformation Under Load	0.0800	%	ASTM D621
Wear Factor	350	10 ⁻⁸ mm ³ /N·m	ASTM G77
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	> 316	°C	ASTM D648
CLTE - Flow			ASTM D696
< 149°C	2.5E-5	cm/cm/°C	
> 149°C	4.5E-5	cm/cm/°C	
NOTE			
1.	at Break		
2.	Transverse		

- | | |
|----|-----------------------|
| 3. | Axial |
| 4. | PV = 12600 psi-ft/min |

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