Filled PTFE Article

Code:Filled PTFE Article

Description

With professional Filled PTFE Article factory, Ningbo Kaxite Sealing Materials Co.,Ltd is one of the leading China Filled PTFE Article manufacturers and suppliers.

Filled PTFE Article
Product number:Filled PTFE Article

Improved compression strength
Improved thermal conductivity
Dereased thermal expansioin
Improved abrasion resistance

Item no.: Filled PTFE Article

[Features]

Filled PTFE article is manufactured by moding method with filled PTFE resin. Filled PTFE resin is manufactured by compounding PTFE granular resin with fillers of many differents kinds. Amongst the many fillers suitable for compounding with PTFE, glass fiber, carbon fiber, Bronze and also lubricating materials like graphite, molybdenum disulphide, have been widely used in large scale production, Broadly speaking PTFE compounds have the following advantage over unfilled.
PTFE.

outside diameter /Inside diameter XHigh (mm)	outside diameter /Inside diameter XHigh (mm)	outside diameter /Inside diameter XHigh (mm)	outside diameter /Inside diameter XHigh (mm)
15/10X40	71/55X90	115/65X100	170/100X100
30/19X70	75/42X150	115/75X100	172/135X50
36/24X50	77/55X100	117/80X110	172/145X115
40/18X100	79/65X80	120/98X70	187/159X70
40/20X100	83/30X100	122/102X60	205/162X90
42/25X100	83/60X100	125/60X100	213/189X100
48/36X100	84/53X70	125/80X85	220/170X40
49/39X50	64/60X100	127/86X100	229/185X70
50/28X100	90/68X100	129/112X62	250/214X100
57/40X50	93/60X100	135/92X65	284/250X95
60/30X50	93/65X100	140/100X100	290/240X120

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64/30X50	100/60X100	141/112X100	304/364X50
66/45X50	100/65X100	142/112X100	325/285X100
66/51X50	100/75X100	148/118X100	390/354X120
66/55X50	100/84X50	150/110X100	395/355X50
68/42X60	102/65X100	160/130X65	516/468X80
69/42X100	107/65X100	162/126X100	578/530X90
70/45X50	110/50X70	164/137X62	
	110/65X125	164/124X60	

[Main properties]

Produc No.	Filled compound and Content by wt	Tensie strength MPa(min)	Ultimate strength %(min)	Compresive strength MPa(min)
1	20% glass fiber	10	120	16
2	25% glass fiber	10	100	16
3	20% glass fiber 5% graphile	10	120	16
4	60% Bronze	10	80	20
5	15% carbon fiber	11	130	16
6	24% Bronze 12% glass fiber 6% graphile	9	100	16
7	15% glass fiber 10% Polyikmide 5% graphile	10	120	16.7

[Application of filled PTFE]

Application	Necessary proerties	Suggested grades of filled PTFE
Gaskets	Creep resistance,chemical resistance	#1 #2 #3 #5
Valve seas	Creep resistance, Lowfriction,chemical resistance	#1 #2 #3 #5
Packings	Creep resistance, Lowfriction,Low wear,chemical resistance, stiffness	#1 #3 #5 #7
Bearings	Low wear,Lowfriction,Creep resistance	#1 #4 #5 #6
Bearing Pads	Creep resistance, Lowfriction, resistant to weathering	#3
Piston rings	Creep resistance, Lowfriction,chemical resistance, stiffness	#1 #2 #3 #5

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Property		ASTM test	Value
Physical properties	Specific gravity	D792	2.15
	Water absorption (%)	D570 / 24 hrs 1/3" t	< 0.00
	Mold shrinkage (cm / cm)		0.02 - 0.05
	Contact angle (degree)	Angle to level	110
Thermal properties	Thermal conductivity (cal/sec/cm2, o /cm)	C177	6 x 10 - 4
	Coefficient of liner thermal expansion(1/oC)	D696 / 23 - 60oC	10 x 10 - 5
	Melting point (oC)		327
	Melt viscosity (poise)		1011 - 1013
			(340 -380oC)
	Maximum temperature for continuous use (oC / oF)		260 / 500
Mechanical properties	Tensile strength (kgf / cm2)	D638 / 23oC	140 - 350
	Elongation (%)	D638 / 23oC	200 - 400
	Compression strength (kgf / cm2)	D695 / 1 % deformation, 25oC	50 - 60
	Tensile modulus (kgf / cm2)	D638 / 23oC	4,000
	Flexural modulus (kgf / cm2)	D790 / 23oC	5,000 - 6,000
	Impact strength (ft - lb / in)	D256 / 23oC, Izod	3
	Hardness (Shore)	Durometer	D50 - D65
	Deformation under load (%)	D621 / 100oC, 70 kgf / cm2, 24 hrs	5
		D621 / 25oC, 140 kgf / cm2, 24 hrs	7
	Static friction coefficient	Coated - steel surface	0.02
Electrical properties	Dielectric constant	D150 / 103Hz	2.1
		D150 / 106 Hz	2.1
	Dielectric dissipation factor	D150 / 103 Hz	< 1 x 10 - 5
	Dielectric break down strength (V / mil)	D149 / Short time,1/ 8 in	480
	Volume resistivity(ohm - cm)	D257	> 1018
	Chemical resistance		Excellent
	Weather ability		Excellent
	Combustibility (%)	D2863 / Oxygen concentration index	> 95