

PROPERTY*	UNITS	ASTM or UL TEST	TIVAR® H.O.T	TIVAR® CLEANSTAT	TIVAR® EXP	TIVAR® 1000 POLYSTEEL	TIVAR® UV RESISTANT	TIVAR® DS
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PHYSICAL								
DENSITY	gm/cc	ASTM D-792	0.94	0.94	0.95	1.45	0.93	0.93
TENSILE PROPERTIES		ASTM D-638						
YIELD STRENGTH	psi		3500	3075	2700	2334	3000	3205
TENSILE AT BREAK	psi		5800	5163	5280	2755	4000	5990
ELONGATION AT BREAK	percent		300	200	300	125	140	400
TENSILE MODULUS	psi	ASTM D-638	100,000	118,900	101,900	N/A	156,900	154,900
FLEXURAL MODULUS		ASTM D-790B	110,000					
1% SCANT	psi			110,230	85,000	108,750	100,000	92,390
IMPACT STRENGTH								
IZOD IMPACT		ASTM D-256A	NO BREAK	NO BREAK	NO BREAK	NO BREAK	NO BREAK	NO BREAK
TENSILE IMPACT	ft-lbs/in <sup>2</sup>	ASTM D-1822		702	343	250	400	1200

WEAR								
SAND ON WHEEL	mg weight loss			130	91	240	100	90
ABRASION INDEX	1018 steel=100		10	N/A	9	N/A	10	9
COEFFICIENT OF FRICTION (DRY vs. STEEL)		QTM55007						
STATIC				0.15	0.2	0.2	.15 - .20	0.18
KINETIC			0.12	0.12	0.17	0.14	.10 - .14	0.12
HARDNESS	shore D		68	68	70	64	68	68

ELECTRICAL/FDA								
STATIC DECAY TIME	seconds	FTS-101C					<0.1	
DIELECTRIC CONSTANT		ASTM D-150	2.3					
DISSIPATION FACTOR		ASTM D-150	.0005					
SURFACE RESISTIVITY	ohms	ASTM D-257	1013	107 - 1010	1017	1017	105 - 109	1015
VOLUME RESISTIVITY	ohms-cm	ASTM D-257	1013	107 - 1010	1017	1017	105 - 109	1015
FDA STANDARDS			YES	YES	NO	NO	NO	NO

TEMPERATURE								
TEMPERATURE RANGE		ASTM D-648						
MAXIMUM**								
CONSTANT	°F		275	180	180	180	180	180
INTERMITTENT	°F			200	250	200	200	200
MINIMUM			N/A	N/A	N/A	N/A	N/A	N/A
COF THERMAL EXPANSION		ASTM D-2240						
-30° to + 60°	in/in/°c			2 x 10-4	1.6 x 10-4	1.8 x 10-4	2 x 10-4	2 x 10-4
-54° to + 140°	in/in/°f			1.1 x 10-4	0.9 x 10-4	1 x 10-4	1.1 x 10-4	1.1 x 10-4

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