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F-50 Specification and Uses

These data were obtained by ASTM D-461 Test Methods, ASTM D-2475 Standards, and NTA Wool Felt Specifications.



Commercial Standard Grade	16R1X
SAE Number	F-50
NTA Number	34R1
<i>GENERAL PROPERTIES</i>	
Wool Content (fiber basis)	min. 95%
Density (1")	15.60 lbs/sq yd
Standard Thickness Range	3/64" to 3/32"
Standard Width	60" to 72"
Color	White
<i>PHYSICAL PROPERTIES</i>	
Specific Gravity	34%
Therm. Cond. (70F)	0.32 btu / hr / sq ft / °F / in.
Thermal Expansion	0
Air Perm (1/16")	15-25 cfm/sq ft/0.5" H2O
Liquid Absorption by volume	>180% by weight (1.0 sp gr) 75
Capillarity (wicking height, 575 SSU, 70F)	4.00
Coefficient of Friction (1)	0.37
** Vibration Absorption (2) static load bearing cap/unit area Dynamic stress endurance	-- --
Noise Reduction Coef (1")	0.55
<i>MECHANICAL PROPERTIES</i>	
Tensile Strength (min)	500 psi
Elongation (100 psi)	8 %
Mullen Bursting Strength (1/8")	225 psi
Split Resistance (min)	-- lb/2" width
Hardness Range	-- Shore A
Compressibility (10% defl)	-- psi
Recovery (within 1 min after 10% defl)	99%
Abrasion Resistance (3)	Excellent
<i>CHEMICAL AND ENVIRONMENTAL PROPERTIES</i>	
Effect of Sunlight and Oxidation	None
Solvent Resistance and Stability in Oil	Excellent
Acid Resistance, dilute Concentrated	Excellent Fair-Good
Alkali Resistance, dilute Concentrated	Fair Low
Temperature Range	-80 to +200°F
<i>TYPICAL USES</i>	
Ball and roller bearing precision seals, strip wicks, industrial filters and uses requiring thin precision felt.	

F-50 Density and Thickness



S.A.E. Specification Number	F-50
A.S.T.M. Federal and Felt Association Type and Grade Number	16R1X
Density Percent Specific Gravity	33.3
Actual (1) Wool Content (Min.) Percent	95
Carbon Tetrachloride Soluble (Max.) Percent	2.5
Water Soluble (Max.) Percent	2.5
Carbon Tetrachloride & Water Soluble (Max.) Percent	3.0
Ash (Max.) Percent	1.5
Tensile Strength (Min.) PSI	500
Splitting Resistance (Min.) Lbs. Per 2" Width	--
Trade Designation	Ball Bearing Felt
Color	White
Standard Width Inches	60



THICKNESS		WEIGHT	
Nominal (inch)	Limits (inch)	Nominal (lbs/sq. yd.)	Limits (lbs/sq. yd.)
3/16	0.040 - 0.054	0.750	0.712 - 0.778
1/16	0.056 - 0.070	0.975	0.937 - 1.013
5/64	0.071 - 0.085	1.200	1.162 - 1.238
3/32	0.087 - 0.101	1.425	1.387 - 1.463