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F-10 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	9R1
SAE Number	F-10
NTA Number	18R1
GENERAL PROPERTIES	
Wool Content (fiber basis)	min. 95%
Density (1")	8.48 lbs/sq yd
Standard Thickness Range	1/8" to 1"
Standard Width	72"
Color	White
PHYSICAL PROPERTIES	
Specific Gravity	18%
Therm. Cond. (70F)	0.30 btu / hr / sq ft / °F / in.
Thermal Expansion	0
Air Perm (1/16")	75-150 cfm/sq ft/0.5" H2O
Liquid Absorption by volume	>400% by weight (1.0 sp gr) 88
Capillarity (wicking height, 575 SSU, 70F)	2.50
Coefficient of Friction (1)	0.37
** Vibration Absorption (2) static load bearing cap/unit area Dynamic stress endurance	Low High
Noise Reduction Coef (1")	0.58
MECHANICAL PROPERTIES	
Tensile Strength (min)	225 psi
Elongation (100 psi)	33 %
Mullen Bursting Strength (1/8")	75 psi
Split Resistance (min)	8 lb/2" width
Hardness Range	15-25 Shore A
Compressibility (10% defl)	4 psi
Recovery (within 1 min after 10% defl)	99%
Abrasion Resistance (3)	Fair
CHEMICAL AND ENVIRONMENTAL PROPERTIES	
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
TYPICAL USES	
Fluid storage and delivery, resilient padding, plug filters for gas and air.	

F-10 Density and Thickness



S.A.E. Specification Number	F-10
A.S.T.M. Federal and Felt Association Type and Grade Number	12R3X
A.S.T.M. Federal and Felt Association Type and Grade Number	9R1
Density Percent Specific Gravity	18.1
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	2.5
Tensile Strength (Min.) PSI	225
Splitting Resistance (Min.) Lbs. Per 2" Width	8
Trade Designation	Firm Pad
Color	White
Standard Width Inches	72



THICKNESS		WEIGHT	
Nominal (inch)	Limits (inch)	Nominal (lbs/sq. yd.)	Limits (lbs/sq. yd.)
1/8	0.105 - 0.145	1.06	0.98 - 1.14
3/16	0.165 - 0.211	1.59	1.47 - 1.71
1/4	0.224 - 0.276	2.12	1.96 - 2.28
5/16	0.284 - 0.342	2.65	2.45 - 2.85
3/8	0.343 - 0.407	3.18	2.94 - 3.42
1/2	0.462 - 0.538	4.24	3.92 - 4.56
5/8	0.581 - 0.669	5.30	4.90 - 5.70
3/4	0.700 - 0.800	6.36	5.88 - 6.84
7/8	0.819 - 0.931	7.42	6.86 - 7.98
1	0.938 - 1.062	8.48	7.84 - 9.12