

F-1 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	16R1
SAE Number	F-1
NTA Number	34R1
<i>GENERAL PROPERTIES</i>	
Wool Content (fiber basis)	min. 95%
Density (1")	16.00 lbs/sq yd
Standard Thickness Range	1/8" to 1"
Standard Width	60"
Color	White
<i>PHYSICAL PROPERTIES</i>	
Specific Gravity	34%
Therm. Cond. (70F)	0.36 btu / hr / sq ft / °F / in.
Thermal Expansion	0
Air Perm (1/16")	30-Oct cfm/sq ft/0.5" H2O
**Liquid Absorption	>175% by weight (1.0 sp gr)
** by volume	74
Capillarity (wicking height, 575 SSU, 70F)	4
Coefficient of Friction (1)	0.37
** Vibration Absorption (2) static load bearing cap/unit area	High
Dynamic stress endurance	High
Noise Reduction Coef (1")	0.50
<i>MECHANICAL PROPERTIES</i>	
Tensile Strength (min)	500 psi
Elongation (100 psi)	13 %
Mullen Bursting Strength (1/8")	250 psi
Split Resistance (min)	33 lb/2" width
Hardness Range	30-40 Shore A
Compressibility (10% defl), psi	21
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	Excellent
Concentrated	Good-fair
Alkali Resistance, dilute	Fair
Concentrated	Low
Temperature Range, °F	-80 to +200
<i>TYPICAL USES</i>	
Bearing seals, ink rolls, polishing, printing pads, lubricator wicks, and precision uses where high grade felt with good appearance and durability is desired.	

F-1 Density and Thickness



S.A.E. Specification Number	F-1
A.S.T.M. Federal and Felt Association Type and Grade Number	16R1
Density Percent Specific Gravity	34.2
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	33
Trade Designation	Back Check
Color	White
Standard Width Inches	60



THICKNESS		WEIGHT	
Nominal (inch)	Limits (inch)	Nominal (lbs/sq. yd.)	Limits (lbs/sq. yd.)
1/8	0.113 - 0.137	2.0	1.90 - 2.10
3/16	0.175 - 0.201	3.0	2.85 - 3.15
1/4	0.236 - 0.264	4.0	3.80 - 4.20
5/16	0.298 - 0.328	5.0	4.75 - 5.25
3/8	0.359 - 0.391	6.0	5.70 - 6.30
1/2	0.481 - 0.519	8.0	7.60 - 8.40
5/8	0.603 - 0.647	10.0	9.50 - 10.50
3/4	0.725 - 0.775	12.0	11.40 - 12.60
7/8	0.847 - 0.903	14.0	13.30 - 14.70
1	0.969 - 1.031	16.0	15.20 - 16.80