

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 3291

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Revised

F E L T, K A P O K

~~CANCELLED~~

1. ACKNOWLEDGMENT: A vendor must mention this specification number in all quotations and when acknowledging purchase orders.
2. APPLICATION: This material shall be suitable for applications where sound and/or heat insulation is required.
3. COMPOSITION: (a) This material shall be made of 50-60% minimum Kapok, 0-40% wool and/or 0-40% cotton and/or synthetic fiber.
4. REQUIREMENTS: (a) This material shall be well carded to produce a uniform and even mixture which shall be well hardened to meet the weight and thickness requirements.

(b) The weight requirements for various thicknesses are as follows:-

WEIGHT OF FELT - LBS. PER SQ. YD.
Nominal Thickness, Inch.

Thickness	Min	Max	Thickness	Min	Max
1/16	.30	.35	3/8	1.10	1.30
1/8	.35	.45	1/2	1.45	1.80
1/4	.55	.70			

(c) The material shall be flame-proofed so that no flame shall be propagated from its surface when a specimen not less than six inches square is held for 30 seconds over the tip of a blue Bunsen flame adjusted to a height of 1 3/4 inches. This test shall be conducted under a hood with a fan idle to provide for a minimum movement of air currents.

(d) The thermal conductivity of this material shall not exceed 0.25 B.T.U. per inch of thickness per square foot per hour per degree Fahrenheit temperature difference at a mean temperature of 60°F.

(e) This material shall not increase appreciably in weight over a period of time under normal atmospheric conditions because of moisture absorption.

(f) This material shall not settle, fray or pull apart when spot cemented to a panel and subjected to extreme vibration.

5. QUALITY: (a) All felt shall be reasonably uniform in thickness and shall be free from tears, holes, lumps, wrinkles, foreign matter or other imperfections affecting appearances and/or serviceability.
6. TESTS: All tests shall be made in accordance with the latest revision of A.S.T.M. Specification D-461, Testing of Wool Felts.

7. TOLERANCES: The permissible thickness tolerances shall be as follows:-

NOMINAL THICKNESS INCHES

Thickness	Min	Max	Thickness	Min	Max
1/16	.042	.082	3/8	.333	.416
1/8	.100	.150	1/2	.450	.550
1/4	.217	.293			

8. APPROVAL: A manufacturer shall not supply material to this specification until samples are approved by the purchaser and after approval the constituents and/or methods of manufacture shall not be changed without written permission from the purchaser. Results of the tests on incoming shipments shall be as good as those on the approved samples.
9. REJECTIONS: Material not conforming to this specification, or modifications specified on the drawing or purchase order, is subject to rejection. If samples for verification are desired they must be claimed within three weeks. Rejected material or parts will be held for a reasonable time, at the vendor's risk, awaiting shipping instructions for the return of same for credit or replacement, as specified. Vendor shall pay all transportation charges.

NOTE: SIMILAR SPECIFICATIONS: Air Corps 16098 is listed for information only and shall not be construed as an acceptable alternate unless all the requirements of this AMS are met.