

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
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Revised

## CORRUGATED FIBREBOARD (Double Wall)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. MATERIAL: The material shall consist of two corrugated members of paper board separated and lined on both sides with water-repellent paper sheet.
3. APPLICATION: The corrugated fibreboard described by this specification shall be suitable for use in the construction of outer containers. Containers shall be of stapled construction.
4. CONSTRUCTION:
  - (a) Liners.- The liners shall be made from 100% kraft paper board of .023 inch minimum thickness and a minimum weight of 90 lb. per 1000 sq. ft.
  - (b) Corrugated Members.- The corrugated members shall be made from paper board of .010 inch minimum thickness and a minimum weight of 35 lb. per 1000 sq. ft. There shall be 40 to 52 corrugations per foot having a height of approximately  $3/32$  to  $5/32$  inch (B or C flute).
  - (c) Impregnation.- The liners and the corrugated member shall be completely impregnated with a moisture-resistant sizing material.
  - (d) Components.- All component parts shall be bonded with a water and oil-resistant adhesive that will withstand the ply separation test specified in paragraph 5 (c). The corrugated members shall be bonded securely to the liners at the apex of all corrugations.
5. REQUIREMENTS:
  - (a) Tensile Strength of Corrugated Fibreboard.- In all cases, the tensile strength shall be taken as the average of at least six determinations.
    - (1) Dry.- Tensile specimens shall have a minimum original tensile strength of 275 lbs. per inch width when cut across the corrugations and 220 lbs. per width when cut parallel to the corrugations.
    - (2) Wet.- Tensile specimens after immersion for 2-1/2 hours in water at room temperature shall have a minimum tensile strength of 50 lbs. per inch width when cut across the corrugations and 40 lbs. per inch width when cut parallel to the corrugations. The test shall be conducted immediately after removing the board from the water.
    - (3) Retest Dry.- Upon drying, the tensile strength shall be not less than the specified dry minimum.
  - (b) Mullen Test.- When determining the Mullen strength for each of the specified conditions the average of at least six readings shall be taken on each liner of the corrugated fibreboard. When selecting samples for test only sound, unscored sections shall be used. The samples shall be clamped firmly to prevent slipping. Readings shall be discarded when there is a double burst, distinguished by two distinct pops. If the liner fails to pass this test, a retest of additional samples taken from the same lot of material, to provide 24 punctures, 12 from each side of the board shall be taken. If the average of these tests does not fall below the specified minimum the board will be acceptable.