

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS 3641 A

Issued 11-1-46

Revised 12-1-53

PLASTIC MOLDINGS, THERMOSETTING Phenol Formaldehyde, Macerated Fabric Filled

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Compression or transfer moldings.
3. **APPLICATION:** Primarily for parts requiring good mechanical properties, particularly impact strength.
4. **TECHNICAL REQUIREMENTS:**
 - 4.1 **General:**
 - 4.1.1 **Color and Condition:** Unless otherwise specified a black opaque product shall be furnished. The product shall be natural, brown or red, when so stipulated.
 - 4.1.2 **Weathering:** When specified, the product shall have weather resistance acceptable to the purchaser as determined by a procedure agreed upon by purchaser and vendor.
 - 4.1.3 **Corrosion:** The product shall not have a corrosive effect on other materials when exposed to conditions normally encountered in service. Discoloration of metals shall not be considered objectionable.
 - 4.2 **Physical Properties:** The product shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with listed ASTM methods, insofar as practicable.

4.2.1 Tensile Strength, psi, min	6000	ASTM D651-48
4.2.2 Compressive Strength, psi, min	18000	ASTM D695-52T
4.2.3 Flexural Strength, psi, min	9000	ASTM D790-49T
4.2.4 Impact Strength, (Notched Izod) ft-lb per in. of notch, min	1.75	ASTM D256-47T, Method A
4.2.5 Specific Gravity, 73.4/73.4 F	1.35-1.45	ASTM D792-50, Method A
4.2.6 Water Absorption (24 hr immersion), % Gain, max	1.75	ASTM D570-42

Section 7C of the SAE Technical Board rules provides that: "All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against infringement of patents."

5. QUALITY: The product shall be uniform in quality and condition, clean, smooth, and free from foreign materials and from defects detrimental to fabrication, appearance or performance of parts.

6. REPORTS:

6.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report stating that the product meets the requirements of this specification. This report shall include the purchase order number, material specification number, vendor's compound number, form or part number and quantity.

6.2 Unless otherwise specified, the vendor of finished or semi-finished parts shall furnish with each shipment three copies of a report showing the purchase order number, material specification number, contractor or other direct supplier of material, part number, and quantity. When material for making parts is produced or purchased by the parts vendor, that vendor shall inspect each lot of material to determine conformance to the requirements of this specification and shall include in the report a statement that the material conforms, or shall include copies of laboratory reports showing the results of tests to determine conformance.

7. IDENTIFICATION: Unless otherwise specified, all parts of suitable size shall have the part number molded or permanently impressed thereon.

8. PACKAGING:

8.1 Packaging shall be accomplished in such a manner as to ensure that the product, during shipment and storage, will not be permanently distorted, and will be protected against damage from exposure to weather or any normal hazard.

8.2 Each package shall be permanently and legibly marked to give the following information:

PART NUMBER _____
COLOR _____
QUANTITY _____
PURCHASE ORDER NUMBER _____
MATERIAL SPECIFICATION AMS 3641A
MANUFACTURER'S IDENTIFICATION _____

9. APPROVAL:

9.1 To assure adequate performance characteristics, compounds shall be approved by purchaser before material for production use is supplied, unless such approval be waived. Results of tests on production material shall be essentially equivalent to those on the approved sample.