AERONAUTICAL MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

AMS 3740

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Revised

POTTING COMPOUND, EPOXY, FILLED
15 - 20 CTE, 225 HDT
Free Machining

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.

2. TYPE: Filled epoxy resin formulation consisting of two components, a filled epoxy resin and a hardener.

3. APPLICATION: Primarily for embedment and encasement of electronic component assemblies and for manufacture of cast resin parts. This mixture exhibits low thermal expansion and a high heat distortion point. In addition, this mixture is easily machinable.

4. TECHNICAL REQUIREMENTS:

4.1 General:

4.1.1 Curing: When mixed and cured in accordance with manufacturer's recommendations, formulation shall polymerize to a uniform, rigid material.

4.1.2 Pot Life: Material is 100 g batches shall have a useful pot life of not less than 1 hr at 60 - 170 F.

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 metal shall not be considered objectionable.

4.1.4 Machinability: The cured product, when machined, shall not cause undue wear on machine tools.

4.2 Properties: The product, when cured to obtain optimum properties, shall conform to the following requirements. Tests shall be performed on specimens cast, after mixing as recommended by the manufacturer, in suitable bar and slab molds, and, insofar as practicable, in accordance with listed ASTM methods.

4.2.1	Flexural Strength, psi, min	10,000	ASTM D790-49T
4.2.2	Impact Strength, Izod, ft-lb per in. of notch, min	0.25	ASTM D256-56, Method C
4.2.3	Heat Distortion Temperature (264 psi fiber stress), deg Fahr, min	225	ASTM D648-56
4.2.4	Insulation Resistance, megohms, min at 75 F at 250 F	 1.0×10^6 0.5×10^6	ASTM D257-54T
4.2.5	Dielectric Strength, v per mil, min	300	ASTM D149-55T