AERONAUTICAL MATERIAL SPECIFICATIONS

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

AMS 3738A

Issued 1-15-58
Revised 6-15-59

POTTING COMPOUND, EPOXY, FILLED
15 - 20 CTE, 180 HDT

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

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

3. APPLICATION: Primarily for embedment and encasement of electronic and electrical component assemblies where low thermal expansion is required and maximum adhesion to most metals and thermosetting plastics is needed.

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. Material shall attain excellent adhesion to most metals and thermosetting plastics when surfaces to be bonded have been prepared in accordance with manufacturer's instructions.

4.1.2 Pot Life: Material in 100 g batches shall have a useful pot life of not less Ø than 1/2 hr when maintained at 60 - 158 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.

4.2 Properties: The product shall conform to the following requirements. Except for the test of 4.2.1 (see Note 1), tests shall be performed on specimens cast, Ø after mixing as recommended by the manufacturer, in suitable bar and slab molds and cured to obtain optimum properties. Tests shall be performed, insofar as practicable, in accordance with listed ASTM methods or as noted.

Ø 4.2.1	Viscosity: centipoises, max	2,500	See Note 1
Ø 4.2.2	Cure Shrinkage, %, max	2.0	See Note 2
4.2.3	Flexural Strength, psi, min	8,000	ASTM D790-49T
4.2.4	Impact Strength, Izod, ft-lb per in. of notch, min	0.18	ASTM D256-56 Method C
4.2.5	Heat Distortion Temperature (264 psi fiber stress), deg Fahr, min	180	ASTM D648-56
4.2.6 Ø	Insulation Resistance, megohms, min		ASTM D257-57T
	at 75 F	1.0×10^6	
	at 212 F	0.5×10^6	