AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS3620

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Revised

PLASTIC MOLDINGS AND EXTRUSIONS
Polystyrene

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

2. FORM: Extrusions, compression or injection moldings.

3. APPLICATION: The thermoplastic product, with good electrical properties, strength and dimensional stability is primarily intended for applications requiring such properties. The product will not necessarily be suitable for exposure to aromatic fuel, oil or other petroleum hydrocarbons.

4. TECHNICAL REQUIREMENTS: (a) General.-

(1) Color and Condition.- Unless otherwise specified, a colorless transparaent product shall be furnished. The product shall be furnished transparent, translucent, or opaque as specified, and in the color required when so stipulated.

(2) Weathering.- When specified, a weathering test shall be conducted as agreed between the purchaser and the vendor.

(3) Corrosion.- The product shall not have a corrosive or other deleterious effect on other materials when exposed to conditions normally encountered in the operation of aircraft. Discoloration of metals shall not be considered objectionable.

(b) Physical Properties.- The product shall conform to the following requirements as received unless otherwise indicated:

	Value	Test Method
Tensile Strength, psi, min	5000	ASTM D638-44T
Dielectric Strength, short time test, volts per mil, min	500	ASTM D149-40T
Specific Gravity, 77 F/77 F		ASTM D792-44T
Non-Pigmented, max	1.07	
Pigmented, max	1.09	
Water Absorption (24 hr immersion) % gain, max	0.10	ASTM D570-42
Distortion Under Heat (264 psi Fiber Stress), deg Fahr, min	165	ASTM D648-45T
Flammability, in. per min, max	1.50	ASTM D635-44[a]

[a]Specimens shall be 1/8 in. thick.

5. QUALITY: The product shall be uniform in quality and condition, clean, smooth and free from defects detrimental to fabrication, appearance, or performance. Products in which harmful defects are revealed during fabrication will be subject to rejection.

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