

MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

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Issued 1-31-64

Revised

PLASTIC SHEET

Polycarbonate

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **FORM:** Flat, rigid, heat formable sheet.
3. **APPLICATION:** Primarily for aircraft heating ducts, cabin liners, fairings, storage boxes, and decorative laminates.
4. **MATERIAL:** Shall be a virgin polycarbonate resin with any necessary fillers, modifiers, and plasticizers to meet the requirements of this specification.
5. **TECHNICAL REQUIREMENTS:**
 - 5.1 **General:**
 - 5.1.1 **Appearance:** Unless otherwise specified, a light straw, transparent product shall be supplied.
 - 5.2 **Properties:** The product shall conform to the following requirements, tests shall be performed on the product supplied and in accordance with the issue of listed ASTM methods specified in the latest issue of AMS 2350, insofar as practicable.

5.2.1 Tensile Strength at Yield,		ASTM D638
psi, min	7700	
5.2.2 Elongation at Yield, %, min	60	ASTM D638
5.2.3 Modulus of Elasticity in Tension		ASTM D638
psi, min	285,000	
5.2.4 Tensile Heat Distortion at 50 psi Tensile		ASTM D1637
Stress and 2% Extension, min	284 F (140 C)	
5.2.5 Impact Strength, ft-lb per in., min		ASTM D256, Method A
Notched, 77 F (25 C)	12	(Specimen size 0.500 in. x
Unnotched, 77 F (25 C)	60	0.125 in.)
5.2.6 Flexural Strength,		ASTM D790
psi, min	11,000	
5.2.7 Specific Gravity, 73.4/73.4 F (23/23 C)	1.19 - 1.20	ASTM D792
5.2.8 Dielectric Constant, 77.4 F $\pm$ 2 (25.2 C $\pm$ 1.1)		ASTM D150
50% R H and 60 cycles, min	2.75	