AEROSPACE
MATERIAL SPECIFICATIONS

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

AMS 3251D

Issued 11-1-44
Revised 2-15-65

SYNTHETIC RUBBER AND CORK COMPOSITION
General Purpose
Medium

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

2. FORM: Sheet, strip, molded shapes, or as ordered.

3. APPLICATION: Primarily for packings, seals, grommets, line support blocks, tank strap pads, and wherever cushioning and vibration damping are of prime importance.

4. MATERIAL AND FABRICATION:

4.1 Composition: Granulated cork uniformly dispersed in a synthetic rubber compound.

4.2 Joints: Joints shall be vulcanized and the joint section shall have the same strength and size as the solid section.

5. TECHNICAL REQUIREMENTS:

5.1 General:

5.1.1 Condition: Unless otherwise specified, a suitably cured product shall be furnished.

5.1.2 Weathering: When specified, the product shall have weather resistance acceptable to the purchaser as determined by a procedure agreed upon by purchaser and vendor.

5.1.3 Corrosion: Material 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.

5.2 Properties: The product shall conform to the following requirements; tests shall be performed on the Ø product supplied and in accordance with the issue of specified ASTM methods listed in the latest issue of AMS 2350, insofar as practicable.

5.2.1 As Received:

5.2.1.1	Compressibility, %	45 ± 5	ASTM F36
5.2.1.2	Elongation %, min	100	ASTM D412, Die B or C
Ø 5.2.1.3	Density, g per cc	0.83 to 1.05	ASTM D297
5.2.2	Fuel Resistance: (Immediate Deteriorated Properties) Ø		ASTM D471 Medium: ASTM Ref. Fuel A Temperature: 20 - 30 C (68 - 86 F) Time: 24 hr
5.2.2.1	Compressibility Change	-10 to +20	See Note 1
5.2.2.2	Volume Change, %	-5 to +25	

5.2.2.3 Weight Change, %		
5.2.2.3.1 Upon removal from fuel	0 to +25	
5.2.2.3.2 After 24 hr air drying at 20 - 30 C (68 - 86 F), max (based on unimmersed weight)	-8	
5.2.3 Oil Resistance: (Immediate Deteriorated Properties)		ASTM D471 Medium: ASTM Oil No. 1 Temperature: 100 C ± 1 (212 F ± 1.8) Time: 24 hr
5.2.3.1 Compressibility Change	-5 to +20	See Note 1
5.2.3.2 Volume Change, %	-15 to +15	
5.2.3.3 Decomposition	None	
5.2.3.4 Surface Tackiness	None	
5.2.4 Water Absorption: (Immediate Deteriorated Properties)		ASTM D471 Medium: Distilled Water Temperature: 100 C ± 1 (212 F ± 1.8) Time: 1 hr
5.2.4.1 Compressibility Change	0 to +15	See Note 1
5.2.4.2 Volume Change, %	0 to +10	
5.2.4.3 Weight Change, %	0 to +15	
5.2.5 Dry Heat Resistance:		ASTM D573 Temperature: 100 C ± 1 (212 F ± 1.8) Time: 70 hr
5.2.5.1 Compressibility Change	-15 to +5	See Note 1
5.2.5.2 Flexibility	Pass	ASTM D1170
Ø 5.2.6 Compression Set:		ASTM D395, Method B Temperature: 70 C ± 1 (158 F ± 1.8) Time: 22 hr
5.2.6.1 Per cent of original deflection, max	80	
5.2.6.2 Per cent of original thickness, max	20	
5.2.7 Low Temperature Brittleness: Ø	Pass	ASTM D746, Procedure B Temperature: -35 C ± 1 (-31 F ± 1.8) See Note 2

Note 1. Compressibility change is the arithmetic difference between the original and the conditioned compressibilities, both expressed in percentage.