

SAE Aerospace <i>An SAE International Group</i>	AEROSPACE MATERIAL SPECIFICATION	SAE AMS3217/4	REV. B
		Issued 1983-07 Reaffirmed 1998-08 Revised 2011-06 Superseding AMS3217/4A	
Test Slabs, Fluoroelastomer (FKM) 65 - 75			

RATIONALE

This specification is to reaffirm the previous revision of the document. The template has been revised to meet the document standards of SAE. The reference to synthetic lubricant ARM 200 is revised to AMS3023. ASTM test methods for testing properties are cited. Equivalent ingredients for Table 1 changes must be approved by SAE AMS CE Committee.

1. SCOPE

1.1 Form

This specification covers a standard fluoroelastomer (FKM) rubber stock in the form of molded test slabs.

1.2 Application

See AMS3217.

2. APPLICABLE DOCUMENTS

See AMS3217.

3. TECHNICAL REQUIREMENTS

3.1 Basic Specifications

The complete requirements for test slabs described herein and their procurement shall consist of this document and the latest issue of the basic specification AMS3217.

3.2 Material

Shall be a fluoroelastomer (FKM) compounded to the formulation shown in Table 1.

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TABLE 1 - FORMULATION

Ingredients	Parts
Viton E60C [®] or equivalent*	100.0 (See 3.2.1)
Maglite D [®] or equivalent*	3.0 (See 3.2.2)
Sterling MT [®] , N990 or equivalent* (See 3.2.3)	20.0 (See 3.2.1)
Calcium Hydroxide, Reagent Grade	6.0 (See 3.2.2)
Press Cure: 10 minutes $\pm$ 0.5 at 175 °C $\pm$ 3 (347 °F $\pm$ 5)	
Oven Cure: 24 hours $\pm$ 0.5 at 230 °C $\pm$ 3 (466 °F $\pm$ 5)	

*Equivalent ingredients must be approved by SAE AMS Committee CE

3.2.1 Weigh parts to the nearest 0.1 gram.

3.2.2 Weigh parts to the nearest 0.02 gram.

3.2.3 ASTM D 1765 designation.

3.3 Processing

After the elastomer has banded on the rubber mill, premix the other ingredients and add to the milling compound.

3.3.1 The stock shall not be allowed to become hotter than can be handled with the bare hands.

3.3.2 After all ingredients have been incorporated and the stock has been thoroughly milled, the stock shall be passed 10 times through a tight mill.

3.3.3 Suitable preforms shall be cut from the freshly milled stock and molded into test slabs as specified in ASTM D 3182, Figure 1.

3.4 Properties

Shall be as shown in Table 2.

TABLE 2 - PROPERTIES

Paragraph	Property	Requirement	Test Method
3.4.1	Hardness, Durometer "A" or equivalent	70 $\pm$ 5	ASTM D 2240
3.4.2	Tensile strength, minimum	1500 psi (10.3 MPa)	ASTM D 412
3.4.3	Elongation, minimum	175%	ASTM D 412
3.4.4	Specific Gravity	1.83 $\pm$ 0.02	ASTM D 297
3.4.5	Synthetic Lubricant Immersion:	AMS3023 175 °C $\pm$ 3 (347 °F $\pm$ 5) 70 hours $\pm$ 0.5	ASTM D 471
3.4.5.1	Volume Change	+14 to +22%	