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# AEROSPACE MATERIAL SPECIFICATION

**SAE**

AMS 3217/6A

Issued APR 1983  
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Superseding AMS 3217/6

Test Slabs, Phosphonitrilic Fluoroelastomer (FZ)  
65 - 75

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## 1. SCOPE:

## 1.1 Form:

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

## 1.2 Application:

See AMS 3217.

## 2. APPLICABLE DOCUMENTS:

See AMS 3217.

## 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 AMS 3217.

## 3.2 Material:

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

TABLE 1 - Formulation

Ingredients	Parts	
Eypel <sup>®</sup> -F compound 705NC or equivalent*	100	(See 3.2.1)
Vul-Cup 40KE	0.72	(See 3.2.2)
Press Cure:	30 minutes $\pm$ 0.5 at 171 °C $\pm$ 3 (338 °F $\pm$ 5)	
Post Cure:	4 hours $\pm$ 0.2 at 177 °C $\pm$ 3 (351 °F $\pm$ 5).	
*Equivalent ingredients must be approved by Wright Laboratory (WL/MLSE), WPAFB, OH 45433-6533.		

## 3.2.1 Weigh parts to the nearest 0.1 gram.

3.2.2 Weigh parts to the nearest 0.02 gram.

3.3 Processing:

After the elastomer has banded on the rubber mill, add the other ingredients 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 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 ± 5	
3.4.2	Tensile Strength, minimum	1500 psi (10.3 MPa)	
3.4.3	Elongation, minimum	110%	
3.4.4	Specific Gravity	1.74 ± 0.02	
3.4.5	Synthetic Lubricant Immersion:		ARM-200 150 °C ± 3
3.4.5.1	Volume Change	+7 to +13%	(302 °F ± 5) 70 hours ± 0.5

4. QUALITY ASSURANCE PROVISIONS:

See AMS 3217.

5. PREPARATION FOR DELIVERY:

See AMS 3217.

6. ACKNOWLEDGMENT:

See AMS 3217.