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# AEROSPACE MATERIAL SPECIFICATION

**SAE**

**AMS 3217/2A**

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Superseding AMS 3217/2

Submitted for recognition as an American National Standard

## TEST SLABS, ACRYLONITRILE BUTADIENE (NBR-L) Low Acrylonitrile, 65 - 75

### 1. SCOPE:

#### 1.1 Form:

This specification covers a standard acrylonitrile butadiene (NBR-L) rubber stock with low acrylonitrile content 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.

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## 3.2 Material:

(R)

Shall be a low-acrylonitrile butadiene (NBR-L) compounded to the formulation shown in Table 1.

Table 1 - Formulation

| Ingredients                                      | NIST<br>SRM<br>Number | Parts             |
|--------------------------------------------------|-----------------------|-------------------|
| Paracril 18-80® or equivalent*                   | -                     | 100.0 (See 3.2.1) |
| Zinc Oxide                                       | 370                   | 5.0 (See 3.2.2)   |
| Stearic Acid                                     | 372                   | 1.5 (See 3.2.2)   |
| Sulfur                                           | 371                   | 1.5 (See 3.2.2)   |
| Philblack A®, N550 or equivalent*<br>(See 3.2.3) | -                     | 60.0 (See 3.2.1)  |
| Altax® or equivalent*                            | -                     | 1.5 (See 3.2.2)   |

Press Cure: 20 minutes  $\pm$  0.5 at  
155 °C  $\pm$  3 (311 °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.

3.2.3 ASTM D 1765 designation.

## 3.3 Processing:

After the elastomer has banded on the rubber mill, the other ingredients shall be added in the order listed in Table 1.

3.3.1 The stock shall not be allowed to become hotter than can be handled with the bare hands; it is recommended that the stock be removed from the mill and cooled to room temperature before incorporating the final ingredient.

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.