



# AEROSPACE MATERIAL SPECIFICATION

AMS7255

REV. D

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Superseding AMS7255C

Rings, Sealing, Tetrafluoroethylene/Propylene Rubber (FEPM)  
Hydraulic Fluid and Synthetic Oil Resistant  
70 to 80

## RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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## 1. SCOPE:

### 1.1 Form:

This specification covers a tetrafluoroethylene/propylene rubber (FEPM) in the form of molded rings.

### 1.2 Application:

These rings have been used typically as static sealing rings for continuous use from -5 to +232 °C (+23 to +450 °F) in dry air, hydraulic fluids, synthetic lubricants, and high pH chemical decontamination fluids, but usage is not limited to such applications.

### 1.3 Safety - Hazardous Material:

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

## 2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order.

## 2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AMS 2817	Identification and Packaging, Preformed Packings
AMS 3023	Fluid, Reference, for Testing Polyol Ester (and Diester) Resistant Material
AIR851	O-Ring Tension Testing Calculations
AS568	Aerospace Size Standard for O-Rings
AS871	Manufacturing and Inspection Standards for Preformed Packings (O-Rings)
AS1241	Fire Resistant Phosphate Ester Hydraulic Fluid for Aircraft

## 2.2 ASTM Publications:

Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM D 471	Rubber Property-Effect of Liquids
ASTM D 1329	Rubber Property-Retraction at Low Temperature (TR Test)
ASTM D 1414	Rubber O-Rings
ASTM D 2137	Rubber Property - Brittleness Point of Flexible Polymers and Coated Fabrics

## 3. TECHNICAL REQUIREMENTS:

### 3.1 Material:

Shall be a compound, based on a tetrafluoroethylene/propylene rubber, suitably cured to produce a product meeting the requirement of 3.2.

### 3.2 Properties:

Rings shall conform to the requirements shown in Table 1; tests shall be performed on the rings supplied except as otherwise specified herein, and in accordance with ASTM D 1414, insofar as practicable. Testing for tensile strength is not required on rings which are too small to permit assembly on rollers and are, after cutting, too short to permit testing as a single strand. Eliminating testing for tensile strength does not eliminate testing for elongation; elongation test can be made by stretching a ring over a mandrel of a size which will stretch the ring sufficiently to produce the required elongation when figured on the ID of the ring. Calculations of tensile strength and elongation may be made in accordance with AIR851.