



<b>AEROSPACE MATERIAL SPECIFICATION</b>	<b>AMS7254</b>	<b>REV. B</b>
	Issued 2002-11 Revised 2006-09 Stabilized 2014-05  Superseding AMS7254A	
Perfluoroether Elastomer		

#### 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 perfluoroether elastomer in the form of molded rings.

### 1.2 Application

These rings have been used typically as static sealing rings and molded in place gaskets at temperatures between -65 and +400 °F (-54 and +203 °C). The cross-section of such rings is usually not over 0.275 inch (6.98 mm) in diameter or thickness. The material has resistance to a variety of fuels, engine oils, hydraulic oil, and hydraulic fluid, but usage is not limited to such applications. Each application should be considered individually.

### 1.3 Safety - Hazardous Materials

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 issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent supplied herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

## 2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

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

## 2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, [www.astm.org](http://www.astm.org).

ASTM D 297	Rubber Products - Chemical Analysis
ASTM D 395	Rubber Property - Compression Set
ASTM D 471	Rubber Property - Effects of Liquids
ASTM D 573	Rubber - Deterioration in an Air Oven
ASTM D 1329	Rubber Property – Retraction at Lower Temperatures (TR Test)
ASTM D 1414	Rubber O-Rings
ASTM D 1415	Rubber Property – International Hardness, Micro Method

## 2.3 U.S. Government Publications

Available from the Document Automation and Production Service (DAPS), Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Tel: 215-697-6257, <http://assist.daps.dla.mil/quicksearch/>.

FED-STD-595	Colors Used in Government Procurement
MIL-PRF-83282	Hydraulic Fluid, Fire Resistant, Synthetic Hydrocarbon Base

## 2.4 PRI Publications

Available from Performance Research Institute, 161 Thornhill Road, Warrendale, PA 15086-7257, Tel: 724-772-1616, [www.pri-network.org](http://www.pri-network.org)

PD 2000	Procedures for an Industry Qualified Product Management Process
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# 3. TECHNICAL REQUIREMENTS

## 3.1 Material

Shall be a compound, based on a perfluoroether elastomer, suitably cured to produce sealing rings meeting the requirements of 3.2. Material used shall be based on 100% virgin perfluoroether elastomer. No reprocessed or non-perfluoroether polymer is acceptable.

### 3.1.1 Color

Shall be green, approximating FED-STD-595 Table V, color 14193.