



400 COMMONWEALTH DRIVE WARRENDALE PA 15096

AEROSPACE  
MATERIAL  
SPECIFICATION

AMS 7257

Issued 4-1-85  
Revised

RINGS, SEALING, PERFLUOROCARBON RUBBER

High Temperature Fluid Resistant

FFKM Type

75-85

1. SCOPE:

1.1 Form: This specification covers a high temperature fluid resistant perfluorocarbon rubber in the form of molded o-rings.

1.2 Application: Sealing rings for use in contact with air or a variety of fuels, lubricants and hydraulic fluids from -15°C to +290°C (5°F to 555°F). Each application, however, has to be considered individually. Instances are known when this material has been used below -15°C (5°F) and also above 290°C (555°F). The cross section of such rings is usually not over 0.275 in. (7.0 mm) in diameter or thickness. Standard sizes are as shown in AS 568.

2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications, Aerospace Standards, and Aerospace Information Reports shall apply. The applicable issue of other documents shall be specified in AMS 2350.

2.1 SAE Publications: Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096.

2.1.1 Aerospace Material Specifications:

AMS 2350 - Standards and Test Methods

AMS 2817 - Packaging and Identification, Preformed Packings

AMS 3021 - Reference Fluid for Testing Di-Ester (Polyol)  
Resistant Materials

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3.3 Quality: Rings, as received by purchaser, shall be uniform in quality and condition, clean, smooth, as free from foreign material as commercially practicable, and free from internal imperfections detrimental to usage of the rings. Surface imperfections shall, unless otherwise specified, be no greater than permitted by AS 871 for minor defects.

3.4 Sizes and Tolerances: Shall be as specified on the drawing. Inspection for conformance to dimensional requirements shall be made in accordance with AS 871, unless otherwise agreed upon by purchaser and vendor.

#### 4. QUALITY ASSURANCE PROVISIONS:

4.1 Responsibility for Inspection: The vendor of rings shall supply all samples for vendor's tests and shall be responsible for performing all required tests. Results of such tests shall be reported to the purchaser as required by 4.5. Purchaser reserves the right to sample and to perform any confirmatory testing deemed necessary to ensure that the rings conform to the requirements of this specification.

#### 4.2 Classification of Tests:

4.2.1 Acceptance Tests: Tests to determine conformance to the following requirements are classified as acceptance tests and shall be performed on each lot:

Requirement	Paragraph Reference
Hardness, as received	3.2.1.1
Tensile Strength, as received	3.2.1.2
Elongation, as received	3.2.1.3
Compression Set	3.2.6

4.2.2 Periodic Tests: Tests to determine conformance to the following requirements are classified as periodic tests and shall be performed on rings produced from a production batch of compound at intervals not longer than one year.

Requirement	Paragraph Reference
Tensile Strength Change in Synthetic lubricant	3.2.2.2
Elongation Change in Synthetic lubricant	3.2.2.3
Volume Change in Synthetic lubricant	3.2.2.4
Volume Change in Hydraulic Fluid	3.2.3.4
Hardness Change after dry heat exposure	3.2.5.1
Temperature Retraction, TR <sub>10</sub> Point	3.2.7