SAE The Engineering Society For Advancing Mobility Land Sea Air and Space

400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

AMS 7261/1B

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Superseding AMS 7261/1A

RINGS, SEALING, PHOSPHONITRILIC FLUOROELASTOMER
High-Temperature-Fluid Resistant
65 - 75
FZ Type

1. SCOPE:

1.1 Form: This specification covers one type of phosphonitrilic fluoroelastomer in the form of molded rings.

1.2 Classification: Rings having nominal hardness of 70 Durometer A or equivalent.

2. APPLICABLE DOCUMENTS: Shall be as shown in AMS 7261.

3. TECHNICAL REQUIREMENTS:

3.1 Basic Specification: The complete requirements for procuring the sealing rings described herein shall consist of this document and the latest issue of the basic specification, AMS 7261.

3.2 Properties: Shall be as follows:

3.2.1 As Received:

3.2.1.1	Hardness, Durometer "A" or equiv.	70 ± 5
3.2.1.2	Tensile Strength, min	900 psi (6.20 MPa)
3.2.1.3	Elongation, min	100%
3.2.1.4	Specific Gravity	Preproduction Value ± 0.02

3.2.2 Aromatic Fuel Resistance:		ASTM Reference Fuel B (ASTM D471)
3.2.2.1 Hardness Change, Durometer "A" or equiv.	0 to -10	Temperature: 20° - 30°C (68° - 86°F)
3.2.2.2 Tensile Strength Change, max	-25%	Time: 22 hr ± 0.25
3.2.2.3 Elongation Change, max	-15%	
3.2.2.4 Volume Change	+1 to +20%	
3.2.3 Synthetic Lubricant Resistance:		Medium: AMS 3021 fluid (See 8.1)
3.2.3.1 Hardness Change, Durometer "A" or equiv.	0 to -10	Temperature: 150°C ± 3 (302°F ± 5)
3.2.3.2 Tensile Strength Change, max	-20%	Time: 70 hr ± 0.5
3.2.3.3 Elongation Change, max	-15%	
3.2.3.4 Volume Change	+1 to +20%	
3.2.4 Dry Heat Resistance:		Temperature: 175°C ± 3 (347°F ± 5)
3.2.4.1 Hardness Change, Durometer "A" or equiv.	-10 to +10	Time: 70 hr ± 0.5)
3.2.4.2 Tensile Strength Change, max	-20%	
3.2.4.3 Elongation Change, max	-45%	
3.2.4.4 Weight Loss, max	2%	
3.2.5 Compression Set:		
Percent of Original Deflection, max		
3.2.5.1 After 22 hr + 0.25 at 175°C ± 3 (347°F ± 5)	45%	
3.2.5.2 After exposure to AMS 3021 fluid as in 3.2.3	30%	
3.2.6 Low-Temperature Resistance:		
Temperature Retraction TR_{10} Point, max	-55°C (-65°F)	