

**AEROSPACE
MATERIAL
SPECIFICATION**

AMS 7261/3

Issued 4-1-83
Revised

**RINGS, SEALING, PHOSPHONITRILIC FLUOROELASTOMER
High-Temperature-Fluid Resistant
85 - 95
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 90 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. 90 $\pm$ 5

3.2.1.2 Tensile Strength, min 900 psi
(6.20 MPa)

3.2.1.3 Elongation, min 75%

3.2.1.4 Specific Gravity Preproduction
Value $\pm$ 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)

Time: 22 hr $\pm$ 0.25

SAE Technical Board rules provide that: "All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade or their use by governmental agencies is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."

- 3.2.2.2 Tensile Strength Change
max -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)
Temperature: $150^{\circ}\text{C} \pm 3$
($302^{\circ}\text{F} \pm 5$)
Time: 70 hr ± 0.5

- 3.2.3.1 Hardness Change, Durometer
"A" or equiv. 0 to -10
- 3.2.3.2 Tensile Strength Change,
max -20%
- 3.2.3.3 Elongation Change, max -15%
- 3.2.3.4 Volume Change +1 to +20%

3.2.4 Dry Heat Resistance:

Temperature: $175^{\circ}\text{C} \pm 3$
($347^{\circ}\text{F} \pm 5$)
Time: 70 hr ± 0.5

- 3.2.4.1 Hardness Change, Durometer
"A" or equiv. -10 to +10
- 3.2.4.2 Tensile Strength Change,
max -20%
- 3.2.4.3 Elongation Change, max -20%
- 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
 $175^{\circ}\text{C} \pm 3$ ($347^{\circ}\text{F} \pm 5$) 55%
- 3.2.5.2 After exposure to AMS 3021
fluid as in 3.2.3 45%

3.2.6 Low-Temperature Resistance:

Temperature Retraction
TR₁₀ Point, max -55°
(-65°F)