



AEROSPACE MATERIAL SPECIFICATION	AMS7338™	REV. A
	Issued	2013-02
	Stabilized	2019-07
Superseding AMS7338		
Rubber: Butyl (IIR Abbreviation) Phosphate Ester Resistant 65 to 75 Hardness for Seals in Hydraulic Systems, etc.		

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 butyl rubber in the form of molded rings, compression seals, o-ring cord, and molded-in-place gaskets for aeronautical and aerospace applications. As AMS3238 is no longer valid for O-rings. For O-rings, the requirements of AMS7338 shall be met wherever AMS3238 is specified.

1.2 Application

These products have resistance to phosphate ester fluids and/or low permeability to gases, but usage is not limited to such applications. Not suitable for use in contact with petroleum-base fluids due to excessive swell. Each application should be considered separately. This Material Type has a typical service temperature range of -75 to +250 °F (-59 to +121 °C) in air.

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 specified 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.

AMS2817	Packaging and Identification, Preformed Packings
AMS3238	Butyl (IIR) Rubber Phosphate Ester Resistant 65-75
AS568	Aerospace Size Standard for O-Rings
AIR851	O-Ring Tension Testing Calculations
AS5752	Visual Inspection Standard for Elastomeric Sealing Elements Other than O-rings
AS2279	Tolerances, Rubber products
AS2810	Identification and Packaging, Elastomeric Products
ARP3050	Suitable Test Sizes for O-ring Specifications

2.2 ASQ Publications

Available from American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203, Tel: 800-248-1946 (inside USA and Canada) or +1-414-272-8575 (International), www.asq.org.

ANSI/ASQ Z1.4	Sampling Procedures and Tables for Inspection by Attributes
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2.3 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.

ASTM D 297	Rubber Products- Chemical Analysis
ASTM D 395	Rubber Property - Compression Set Method B
ASTM D 471	Rubber Property - Effects of Liquids
ASTM D 573	Rubber Property - Deterioration in an Air Oven
ASTM D 1414	Rubber - Testing O-Rings
ASTM D 2240	Rubber Property - Durometer Hardness
ASTM D 412	Vulcanized Rubber and Thermoplastic Elastomers – Tension
ASTM D 624	Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
ASTM D 1149	Rubber Deterioration – Cracking in an Ozone Controlled Environment
ASTM D 2137	Rubber Property – Brittleness Point of Flexible Polymers and Coated Fabrics