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Superseding AS7949A

(R) Bearings, Ball, Airframe, Antifriction,  
General Standard for

**NOTICE**

This document includes cadmium as a plating material. The use of cadmium has been restricted and/or banned for use in many countries due to environmental and health concerns. The user should consult with local officials on applicable health and environmental regulations regarding its use.

**1. SCOPE:**

This standard covers ball bearings in the -65 to +350 °F temperature range as specified on the applicable drawing standards.

**2. APPLICABLE DOCUMENTS:**

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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## SAE AS7949 Revision B

### 2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AMS 2417	Plating, Zinc-Nickel Alloy
AMS 3652	Polytetrafluoroethylene (PTFE) Film Non-Critical Grade
AMS 3666	Polytetrafluoroethylene (PTFE) Sheet, Glass Cloth Reinforced
AMS 6440	Steel, Bars, Forgings, and Tubing 1.45cr (0.98-1.10c) (SAE 52100) Premium Aircraft-Quality, Consumable Electrode Vacuum Melted
AMS 6444	Steel Bars, Forgings, and Tubing, 1.45cr (0.98 1.10c) for Bearing Applications
AMS-QQ-P-416	Plating, Cadmium (Electro deposited)
AS21428	Bearing, Ball, Airframe, Anti-friction, Extra Light Duty, Precision
AS21443	Bearing, Ball, Airframe, Anti-friction, Pulley Type
AS27640	Bearing, Ball, Airframe, Anti-friction, Heavy Duty
AS27641	Bearing, Ball, Airframe, Anti-friction, Intermediate Duty
AS27642	Bearing, Ball, Airframe, Extra Light Duty
AS27643	Bearing, Ball, Airframe, Anti-friction, Self-aligning, Double Row, Heavy Duty
AS27644	Bearing, Ball, Airframe, Anti-friction, Double Row, Heavy Duty
AS27645	Bearing, Ball, Airframe, Anti-friction, Self-aligning, Light and Heavy Duty
AS27646	Bearing, Ball, Airframe, Anti-friction, Extra Light Duty
AS27647	Bearing, Ball, Airframe, Anti-friction, Extra Wide, Double Row, Intermediate Duty
AS27648	Bearing, Ball, Airframe, Anti-friction, Externally Self-aligning, Extra Light Duty
AS27649	Bearing, Ball, Airframe, Anti-friction, Intermediate Duty

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### 2.2 ASTM Publications:

Available from ASTM, 100 Barr Harbor, West Conshohocken, PA 19428-2959.

ASTM E 1444	Standard Practice for Magnetic Particle Inspection
ASTM F 2215	Standard Specification for Balls, Bearings, Ferrous and Nonferrous for Use in Bearings, Valves, and Bearing Applications

### 2.3 ASME Publications:

Available from ASME, 22 Law Drive, Box 2900, Fairfield, NJ 07007-2900.

ASME B46.1	Surface Texture (Surface Roughness, Waviness and Lay)
ANSI/ABMA STD 4	Gauging/Tolerancing Practices

### 2.4 ISO Publications:

Available from ANSI, 25 West 43rd Street, New York, NY 10036-8002.

ISO 12103-1	Arizona Road Dust
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### 2.5 U.S. Government Publications:

Available from Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094. Electronic copies may be obtained from <http://assist.daps.mil/quicksearch>

MIL-DTL-197	Packaging of Bearings, Antifriction, Associated Parts and Subassemblies
MIL-PRF-23827	Grease, Aircraft and Instrument, Gear and Actuator Screw
MIL-PRF-81322	Grease, Aircraft, General Purpose, Wide Temperature Range
MIL-STD-129	Standard Practice for Military Marking
MIL-STD-130	Identification Marking of U.S. Military Property
MIL-STD-2073-1	DoD Standard Practice for Military Packaging