Designation: F 2215 – 03$^{\epsilon 1}$

Standard Specification for Balls, Bearings, Ferrous and Nonferrous for Use in Bearings, Valves, and Bearing Applications[1]

This standard is issued under the fixed designation F 2215; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

ϵ[1] NOTE—UNS number in Section A2.1.1 was editorially corrected in January 2004.

1. Scope

1.1 This specification covers requirements for ferrous and nonferrous inch balls. The balls covered in this specification are intended for use in bearings, bearing applications, check valves, and other components using balls.

1.2 This is a general specification. The individual item requirements shall be as specified herein in accordance with the Annex A2 through Annex A9 MS sheet standards. In the event of any conflict between requirements of this specification and the Annex A2 through Annex A9 MS sheet standards, the latter shall govern.

1.3 The values given in inch-pound units are to be regarded as standard. The values given in parentheses are for information only.

1.4 This specification contains many of the requirements of MIL-B-1083, which was originally developed by the Department of Defense and maintained by the Defense Supply Center Richmond. The following government activity codes may be found in the Department of Defense, Standardization Directory SD-1.[2]

Preparing Activity	Custodians	Review Activities
DLA-GS	Army-AT	Army-AV, EA, AR, MI
	Navy-OS	Navy-SH
	Air Force-99	Air Force- 11, 84

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:* [3]

A 108 Specification for Steel Bars, Carbon, Cold-Finished, Standard Quality

A 276 Specification for Stainless Steel Bars and Shapes

A 295 Specification for High-Carbon Anti-Friction Bearing Steels

A 976 Classification of Insulating Coatings by Composition, Relative Insulating Ability and Application

B 21/B 21M Specification for Naval Brass Rod, Bar and Shapes

B 124 Specification for Copper and Copper Alloy Forging Rod, Bar, and Shapes

B 276 Test Method for Apparent Porosity in Cemented Carbides

B 283 Specification for Copper and Copper Alloy Die Forgings (Hot-Pressed)

D 3951 Practice for Commercial Packaging

E 18 Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials

E 112 Test Methods for Determining Average Grain Size

E 140 Standard Hardness Conversion Tables for Metals Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness, Superficial Hardness, Knoop Hardness, and Scleroscope Hardness

E 381 Test Methods for Detector calibration and Analysis of Radionuclides

E 381 ASTM Adjuncts: Photographs for Rating Macroetched Steels (3 Plates)

E 384 Test Method for Microindentation Hardness of Materials

2.2 *SAE Standards:*

AMS 5618 Steel, Corrosion Resistant Bars, Wire and Forgings[4]

AMS 5630 Steel, Corrosion Resistant Bars, Wire and Forgings[4]

AMS 5749 Steel, Corrosion Resistant Bars, Wire and Forging and Tubing Premium Aircraft Quality for Bearing Applications[4]

[1] This specification is under the jurisdiction of ASTM Committee F34 on Rolling Element Bearings and is the direct responsibility of Subcommittee F34.01 on Rolling Element.

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[2] The Department of Defense, Standardization Directory, SD-1, may be found at: http://assist.daps.dla.mil/online/start/.

[3] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[4] Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990.

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