

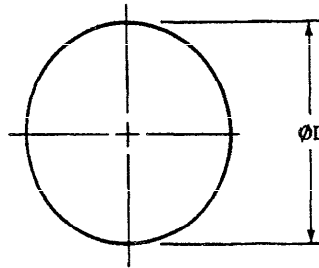
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TABLE I. Dash numbers and dimensions.

ØD NOMINAL BALL DIAMETER	BASIC DIAMETER <sup>1/</sup>	GRADE			
		100	200 <sup>2/</sup>	500	1000
		DASH NUMBER			
1/16	.062500	10001	20001	50001	100001
3/32	.093750	10002	20002	50002	100002
1/8	.125000	10003	20003	50003	100003
5/32	.156250	10004	20004	50004	100004
3/16	.187500	10005	20005	50005	100005
7/32	.218750	10006	20006	50006	100006
1/4	.250000	10007	20007	50007	100007
9/32	.281250	10008	20008	50008	100008
5/16	.312500	10009	20009	50009	100009
11/32	.343750	10010	20010	50010	100010
3/8	.375000	10011	20011	50011	100011
13/32	.406250	10012	20012	50012	100012
7/16	.437500	10013	20013	50013	100013
15/32	.468750	10014	20014	50014	100014
1/2	.500000	10015	20015	50015	100015
9/16	.562500	10016	20016	50016	100016
5/8	.625000	10017	20017	50017	100017
11/16	.687500	10018	20018	50018	100018
3/4	.750000	10019	20019	50019	100019
7/8	.875000	10020	20020	50020	100020
1	1.000000	10021	20021	50021	100021

<sup>1/</sup> See Table III for tolerances.<sup>2/</sup> See note 2.

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P.A. OS Other cust AT, 99	International interest	Title  BALLS, BEARING, CARBON STEEL	MILITARY STANDARD  <b>MS19061</b>
PROCUREMENT SPECIFICATION MIL-B-1083		SUPERSEDES	PAGE 1 OF 2

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TABLE II. Tolerance by grade for individual balls.  
(Tolerance in millionths of an inch)

GRADE	ALLOWABLE BALL DIAMETER VARIATION	ALLOWABLE DEVIATION FROM SPHERICAL FORM	MAXIMUM SURFACE ROUGHNESS (ARITHMETICAL AVERAGE)
	V <sub>D</sub>	W	
100	100	100	5
200	200	200	8
500	500	500	12
1000	1000	1000	15

1. Not applicable

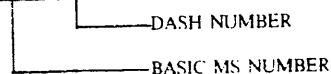
TABLE III. Tolerances by grade for lots of balls.  
(Tolerance in millionths of an inch)

GRADE	ALLOWABLE LOT DIAMETER VARIATION	BASIC DIAMETER TOLERANCE
100	200	± 500
200	400	± 1000
500	1000	± 2000
1000	2000	± 5000

## REQUIREMENTS:

1. MATERIAL: CARBON STEEL CONFORMING TO THE CHEMICAL COMPOSITION OF UNS G10080 THROUGH UNS 10220 IN ACCORDANCE WITH ASTM A108 AND AS SPECIFIED IN PROCUREMENT DOCUMENT.
2. HARDNESS: SHALL BE 60 HRC OR EQUIVALENT. HARDNESS READINGS TAKEN ON SPHERICAL SURFACE ARE SUBJECT TO BALL HARDNESS CORRECTIONS FOR CURVATURES SPECIFIED IN AFBMA-STD-10.
3. SURFACE ROUGHNESS: TOLERANCE LIMITS FOR SURFACE ROUGHNESS AS SPECIFIED IN TABLE II, AND IN ACCORDANCE WITH ANSI B46.1.
4. MATERIAL DENSITY: SHALL BE .284 POUND PER CUBIC INCH.
5. PART NUMBER: CONSISTS OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE I.

EXAMPLE: MS19061-10001



MS19061-10001 INDICATES A GRADE 100 BEARING BALL OF CARBON STEEL WITH A DIAMETER OF 0.062500 INCH

## NOTES:

1. ALL DIMENSIONS ARE IN INCHES. COLUMN HEADINGS IN TOLERANCE TABLES ARE IN ACCORDANCE WITH AFBMA-STD-10.
2. DASH NUMBERS 20001 THRU 20021 WERE FORMERLY DASH 1 THRU 21.
3. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS STANDARD AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE.
4. REFERENCED GOVERNMENT (OR NONGOVERNMENT) DOCUMENTS OF THE ISSUE LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) SPECIFIED IN THE SOLICITATION FORM A PART OF THIS STANDARD TO THE EXTENT SPECIFIED HEREIN.

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ARMY - AV, EA  
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