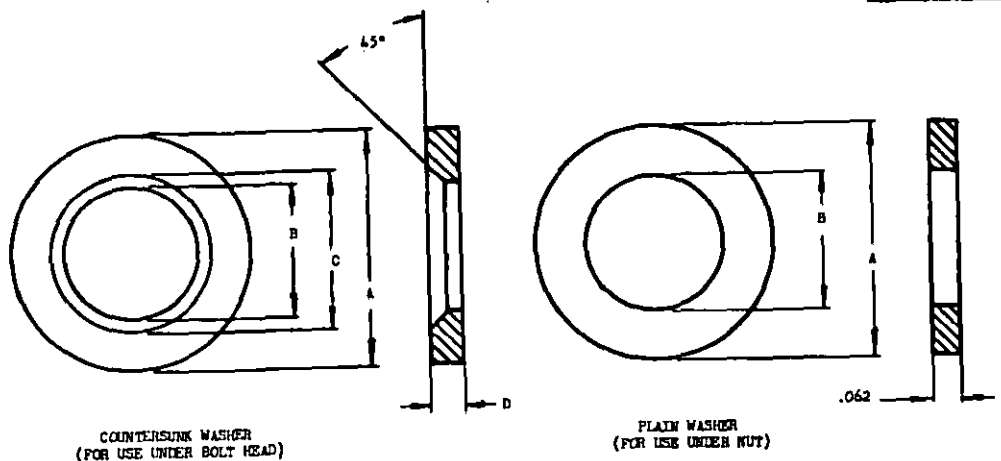


REVIEW SYMBOLS:
 ARMY - AY, AV, AG, AO, WC
 NAVY - NS
 USAF - AS
 U.S. AIR FORCE - AF

"Review" information is current as of the date of this document.
 For future consideration of changes to this document, draft circulation
 should be based on the information in the current edition.

This military standard is approved for use by all Departments
 & Agencies of the Department of Defense. Selection for all new
 engineering and design applications and for replacement use shall
 be made from this document.



COUNTERSUNK WASHER
 (FOR USE UNDER BOLT HEAD)

PLAIN WASHER
 (FOR USE UNDER NUT)

| THREAD SIZE | NS PART NO. | | A DIA | B DIA | | C DIA | | D | FLATNESS TOLERANCE MAX |
|----------------|-------------|------------|----------|----------|-------|----------|-------|------|------------------------------|
| | COUNTERSUNK | PLAIN | | MAX | MIN | MAX | MIN | | |
| 1/4 | MS20002C4 | MS20002-4 | .531 | .260 | .252 | .344 | .334 | .078 | .007 |
| 5/16 | MS20002C5 | MS20002-5 | .593 | .324 | .315 | .406 | .396 | | |
| 3/8 | MS20002C6 | MS20002-6 | .687 | .388 | .378 | .495 | .483 | | |
| 7/16 | MS20002C7 | MS20002-7 | .781 | .451 | .441 | .557 | .543 | .078 | .007 |
| 1/2 | MS20002C8 | MS20002-8 | .875 | .515 | .504 | .620 | .604 | | .007 |
| 9/16 | MS20002C9 | MS20002-9 | .968 | .579 | .568 | .687 | .667 | | .010 |
| 5/8 | MS20002C10 | MS20002-10 | 1.062 | .643 | .631 | .785 | .765 | .078 | .010 |
| 3/4 | MS20002C12 | MS20002-12 | 1.250 | .770 | .757 | .910 | .890 | | |
| 7/8 | MS20002C14 | MS20002-14 | 1.437 | .897 | .884 | 1.035 | 1.015 | | |
| 1 | MS20002C16 | MS20002-16 | 1.625 | 1.025 | 1.010 | 1.160 | 1.140 | .078 | .010 |
| 1-1/8 | MS20002C18 | MS20002-18 | 1.875 | 1.150 | 1.135 | 1.285 | 1.265 | .078 | |
| 1-1/4 | MS20002C20 | MS20002-20 | 2.125 | 1.275 | 1.260 | 1.447 | 1.427 | .094 | |
| 1-3/8 | MS20002C22 | MS20002-22 | 2.313 | 1.400 | 1.385 | 1.572 | 1.552 | .094 | .015 |
| 1-1/2 | MS20002C24 | MS20002-24 | 2.500 | 1.525 | 1.510 | 1.697 | 1.677 | | |

MATERIAL: ALLOY STEEL, FEDERAL STANDARD NO. 66, STEEL NO. 1330, OR 4130.

HEAT TREAT: 125,000 TO 145,000 PSI, SPECIFICATION MIL-H-6875.

FINISH: CADMIUM PLATING PER QQ-P-416, TYPE II, CLASS 2. PARTS WITH CLASS 3 PLATING MAY BE FURNISHED FROM SUPPLIER'S STOCK UNTIL 1 JANUARY 1975.

WASHERS SHALL BE FREE FROM ALL HANGING BURRS AND SLIVERS WHICH MIGHT BECOME DISLODGED UNDER USAGE.

WASHER FACES SHALL BE PARALLEL WITHIN .002 INCH.

DIMENSIONS IN INCHES, UNLESS OTHERWISE SPECIFIED. TOLERANCES: DECIMALS $\pm .010$, ANGLES $\pm 1^\circ$.

THESE WASHERS ARE PRIMARILY FOR USE WITH THE 160,000-PSI INTERNAL WRENCHING BOLTS SHOWN ON MS20004 THROUGH MS20024.

FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

P.A. Navy - AS
 Other Comd
 Army - WC
 USAF - 69

TITLE

WASHER, COUNTERSUNK AND PLAIN, HIGH STRENGTH

MILITARY STANDARD

MS20002

SHEET 1 OF 2

PROCUREMENT SPECIFICATION
 WORK

SUPERSEDES

MS1A1

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

APPROVED 25 MAY 53 REVISED 13 JAN 55 1 APR 57 16 MAY 61 6 MARCH 67 29 DEC 72

SEE SYMBOL:
ARMY - EL, GL

REVIEW SYMBOL:
ARMY - AT, AV, ME, MU, WC
NAVY - AS
USAF - 69

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FED. SUP CLASS
5310

SELECT WASHERS FROM THE FOLLOWING INTERCHANGEABILITY TABLE OF
THIS STANDARD AS SUBSTITUTIVE PARTS FOR EAS 143.

| INACTIVATED PART NOS. | SUBSTITUTIVE PART NOS. | INACTIVATED PART NOS. | SUBSTITUTIVE PART NOS. |
|--------------------------|---------------------------|--------------------------|---------------------------|
| WASHER-C SUNK | | WASHER-PLAIN | |
| NAS143 | MS20002 | NAS143 | MS20002 |
| -4C | C4 | -4 | -4 |
| -5C | C5 | -5 | -5 |
| -6C | C6 | -6 | -6 |
| -7C | C7 | -7 | -7 |
| -8C | C8 | -8 | -8 |
| -9C | C9 | -9 | -9 |
| -10C | C10 | -10 | -10 |
| -12C | C12 | -12 | -12 |
| -14C | C14 | -14 | -14 |
| -16C | C16 | -16 | -16 |
| -18C | C18 | -18 | -18 |
| -20C | C20 | -20 | -20 |
| -22C | C22 | -22 | -22 |
| -24C | C24 | -24 | -24 |

APPROVED 25 JUL 53 REVISED ⑤ FOR CHANGES SEE SHEET 1

| | | |
|---|---|------------------------------|
| P.A. Navy - AB Other Cms Army - WC USAF - 69 | TITLE WASHER, COUNTERSUNK AND PLAIN, HIGH STRENGTH | MILITARY STANDARD MS20002 |
| PROCUREMENT SPECIFICATION NONE | SUPERSEDES NAS143 | SHEET 2 OF 2 |

DD FORM 672-1 (Coordinated)

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