MIL-R-81128 (Wep) <u>4 August 1964</u> Superseding OS-6427 9 June 1950

CODE IDENT 10001

MILITARY SPECIFICATI ON

ROCKET MOTORS, IDENTIFICATION OF PARTS AND ASSEMBLIES, REQUIREMENTS FOR

This specification has been approved by the Bureau of Naval Weapons, Department of the Navy

1. SCOPE

1.1 This specification defines general requirements for the marking of parts and assemblies for solid propellant rocket motors, prepackaged liquid propellant rocket engines, and JATO units.

1.2 <u>Classification.</u> -Marking covered by this specification shall be of the following methods and types, as specified:

Method I - Steel Stamping Method II - Electric Etch or Scribe Method III - Ink Stamp or Stencil Method IV - Decal Method V - Tag Method VI - Integral Type 1 - Component Part Marking, Non-serialized Type 2- Component Part Marking, Serialized

Type 3- Loaded Assembly Marking

Type 4- Igniter Marking

2. APPLICABLE DOC UMENTS

2.1 The following document of the issue in effect on date of invitation for bids form a part of this specification to the extent specified herein.



MIL-R-81128 (WEP)

SPECIFICATION

Military

MIL - D - 8634	Decal, Elastomeric Pigmented Film, For use on Exterior Surfaces
Handbook H4-1, H4-2	Federal Supply Code for Manu- facturers

3. REQUIREMENTS

3.1 <u>General Requirements.</u> -Marking shall comply with the following general requirements.

3.1.1 Location. -The location of marking shall be as required by the drawings. Marking by methods I and II shall not be placed nearer than 0.06 inches to any corner, fillet or sharp edge.

3.1.2 <u>Sequence of Marking.</u> -Marking shall remain visible after the application of final protective finish. Marking shall not mar or penetrate plating, anodizing, paint, or other protective coating. If a protective finish is broken, suitable repairs approved by the procuring activity shall be made.

3.1.3 <u>Size.</u> -Unless otherwise specified, size of characters used for marking shall be appropriate for the part. For rocket motor assemblies, size and spacing of characters used for marking shall be as shown in Table I below:

TABLE I

MARKING SIZE FOR ROCKET MOTOR ASSEMBLIES

Nominal Case Diameter	Height of Lettering	Spacing Between Lines
Up to 10 inches	.25 in. (.18 in.)	.25 in. {.18 in.)
10 inches and over	.50 in. {.25 in.)	.38 in. (.25 in.)

NOTE: Reduced size lettering (i.e., that shown in parentheses above) may be used for subordinate information if necessary to conserve space. Subordinate information is defined as that appearing below the &tted line in 3.3.3.

3.2.1 Method I - Steel Stamp. -Marking shall be an impression cut, pressed, stumped, rolled or peened into the part with suitable tools.

3.2.2 <u>Method II - Electric Etch or Scribe.</u> -Marking shall be a permanent impression made with either an electrically operated vibratory scriber or with an electric arc between the part and a suitable scriber.

3.2.3 <u>Method III - Ink Stamping or Stenci ling.</u> -Marking shall be made using an indelible ink which contrasts **with** the color of the part and is applied by means of a rubber stamp, stencil, or other method which does not scratch or damage the surface of the part. The marking shall I then be covered with clear lacquer or varnish.

3.2.4 <u>Method IV - Decal.</u> -Marking shall consist of a decal which complies with MIL-D-8634.

3.2.5 <u>Method V - Tag.</u> -Marking shall be made on cardboard tag tied to part by string or wire.

3.2.6 <u>Method VI - Integral.</u> -Marking shall be incorporated into dies or molds so that it automatically becomes a feature of parts which are stamped, cast, forged, etc.

3.3 <u>Types of Marking.</u> -The following types of marking content shall be used as specified on the drawings.

3.3.1 <u>Type 1 - Component Part Marking, Non-serialized.</u> -The part shall be marked with BuWeps drawings number, applicable revision letter, and manufacturer's identification as assigned by handbook H-4 or an approved symbol.

3.3.2 Type 2 - Component Part Marking, Serialized -The part shall be marked with BuWeps drawings number, applicable revision letter, part serial number, and manufacturer's identification as assigned by handbook H-4 or an approved symbol.

3.3*3 Type 3 - Loaded Motor Assembly Marking. -Marking of loaded motor assemblies shall contain the following minimum information, arranged approximately as shown and reading from motor forward end to aft end.

Name of Item Mk XX Mod XX

BUWEPS DWG. NO. (Revision Letter) SERIAL NO. XXXXXXX

3

MIL-R-81128 (WEP)

FIRING LIMITS XX "F TO XX "F (Plus Necessary Additional Notes) PROPELLANT GRAIN MK XX (If Applicable) USE IGNITER MK XX MOD XX (If Applicable) SEE PROPULSION UNIT DATA SHEET FOR FIRING EXPIRATION DATE C CONTRACT NO. XXXXXXXX PROPELLANT LOT NO. XXXXXXX PROPELLANT CURE DATE XXX MFG: (OR LOADING ACTIVITY)

3.3.4 <u>Type 4 - Igniter Marking.</u> -Marking of igniters shall contain the fol lowing minimum information arranged approximately as shown:

 IGNITER
 MK XX
 MOD XX
 SERIAL NO.
 XXXXXXX

 BUWEPS DWG. NO.
 XXXXXXX
 (Revision Letter)

 CONTRACT NO.
 XXXXXX
 EXPLOSIVE LOT NO.
 XXXXXXX

 EXPLOSIVE CURE
 DATE
 X X X
 EXPLOSIVE LOT NO.
 XXXXXXX

 MFG:
 (OR LOADING ACTIVITY)
 EXPLOSIVE
 EXPLOSIVE
 EXPLOSIVE

4* QUALITY ASSURANCE PROVISIONS

4.1 <u>Responsibility for Inspection.</u> -Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirement as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections ore deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 <u>Classification of Inspection.</u> -Inspection of the marking procedures shall be classified as follows:

(a) Quality conformance inspection

4.3 Quality Conformance Inspection.

4.3.1 <u>Visual Examination.</u> -Visually examine all parts and assemblies to determine compliance with the proper marking procedures out lined in section 3.

5. PREPARATION FOR DELIVERY

5.1 Not Applicable

6. NOTES

6.1 Not Applicable

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SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureen No. 119-P004	
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B. RECOMMENDATIONS FOR CORR	ECTING THE DEFICIENCIES.		
2. COMMENTS ON ANY SPECIFICATION			
E. COMMENTS ON ANY SPECIFICATION	NEQUIREMENT CONSIDERED TO		
3. IS THE SPECIFICATION RESTRICT			
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