

INCH-POUND

NOTICE OF
CHANGEMIL-STD-1247C
NOTICE 3
25 May 1994

MILITARY STANDARD

MARKINGS, FUNCTIONS AND HAZARD DESIGNATIONS
OF HOSE, PIPE, AND TUBE LINES FOR AIRCRAFT
MILLES AND SPACE SYSTEMS~~TO ALL HOLDERS OF MIL-STD-1247C:~~

1. THE FOLLOWING PAGES OF MIL-STD-1247C HAVE BEEN CORRECTED AND SUPERSEDE THE PAGES LISTED:

NEW PAGE	DATE	SUPERSEDED PAGE	DATE
1	13 October 1989	1	REPRINTED WITHOUT CHANGE
2	10 May 1994	2	13 October 1989
2A	10 May 1994	2	13 October 1989
7	21 October 1991	7	24 March 1993
7A	21 October 1991	7	24 March 1993
8	24 March 1993	8	REPRINTED WITHOUT CHANGE
8A	24 March 1993	8	REPRINTED WITHOUT CHANGE

2. RETAIN THIS NOTICE AND INSERT BEFORE TABLE OF CONTENTS.

3. Holders of MIL-STD-1247 will verify that page changes and additions indicated above have been entered. This notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by stocking points until the military standard is completely revised or canceled.

AMSC N/A

AREA SAFT

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Custodians:

Army - MI
Navy - AS
Air Force - 16

Preparing activity:

Army - MI

(Project SAFT-A035)

Review activities:

Army - AR, AV
Navy - OS
Air Force - 10, 11, 19, 68
DLA - GS

International interest: (para 6.4)

MIL-STD-1247C**1. SCOPE**

1.1 Scope. This standard establishes material labeling requirements for identification, function, subfunction, pressures, hazards, and direction of flow for pipes, hoses, and tube lines used in aircraft, missiles, space systems, and support equipment. The use of colors, words, and symbols to identify the functions of such items (to include approved abbreviations), and the dimensions of labeling items such as tags, tapes, and bands, are specifically prescribed (see 4.1.1).

1.2 Applicability. The criteria for marking functions upon, and designating hazardous pipes, hoses, and tube lines are designed to result in rapid servicing of functional systems to return them to full operation and are an integral part of the complete system. Lines, pipes, and hoses external to these systems should be coded in accordance with MIL-STD-101.

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

QQ-A-250/1 - Aluminum 1100, Plate and Sheet

MILITARY

MIL-S-5059 - Steel, Corrosion-Resistant (18-8), Plate, Sheet and Strip

MIL-T-9906 - Tape, Identification, Aerospace Vehicle Tubing Marker

STANDARDS

FEDERAL

FED-STD-595 - Colors

MILITARY

MIL-STD-101 - Color Code for Pipelines and for Compressed Gas Cylinders

MS21045 - Nut, Self Locking, Hexagon-Regular Height, 450 Degrees F, 125 KSI FTU

MS21919 - Clamp, Loop Type, Cushioned Support

MS33739 - Aircraft Markings, Servicing and Precautioning

MS51958 - Screw, Machine Pan-Head, Cross-Recessed, Corrosion Resisting Steel, UNF-2A

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(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099).

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5. DETAILED REQUIREMENTS

5.1 Function.

5.1.1 Colors. Colors conforming to FED-STD-595 as indicated below shall be used to denote function as specified in 5.1.1.1.

<u>Color</u>	<u>FED-STD-595 Code No.</u>
Blue-----	15102
Green-----	14187
Yellow-----	13655
Orange-----	12197
Red-----	11136
Brown-----	10049
Gray-----	16473
Black-----	17038

5.1.1.1 Application of colors. Color coding shall be based upon function as indicated below. Where more than one color is required to identify a single function the order of colors is from left to right, and the colored area shall be composed of vertical stripes, of equal width, of the required colors (see figures 2 and 4).

<u>Function</u>	<u>Color</u>
Fuel-----	Red
Rocket Oxidizer-----	Green, Gray
Rocket Fuel-----	Red, Gray
Water Injection-----	Red, Gray, Red
Lubrication-----	Yellow
Hydraulic-----	Blue, Yellow
Solvent-----	Blue, Brown
Pneumatic Air-----	Orange, Blue
Instrument Air-----	Orange, Gray
Coolant-----	Blue
Breathing Oxygen-----	Green
Air Conditioning-----	Brown, Gray
Monopropellant-----	Yellow, Orange
Battery Activator-----	Yellow, Gray
Rain Repellants-----	Blue, Gray
Vacuum-----	Gray, Orange, Gray
Fire Protection-----	Brown
De-Icing-----	Gray
Rocket Catalyst-----	Yellow, Green
Compressed Gas-----	Orange
Electrical Conduit-----	Brown, Orange
Inerting Fluid-----	Orange, Green

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<u>Function</u>	<u>Color</u>
Fire Protection-----	Brown
De-Icing-----	Gray
Rocket Catalyst-----	Yellow, Green
Compressed Gas-----	Orange
Electrical Conduit-----	Brown, Orange
Inerting Fluid-----	Orange, Green

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5.1.1.2 Colors on tapes. Tapes used to identify function shall be 1 inch minimum width. The left-hand side shall be colored, and 1/4 inch of the right-hand side shall be reserved for geometric symbols.

5.1.1.3 Colors on painted bands. Paints used for color coding lines in accordance with 4.2.3 shall conform to the color requirements of 5.1.1 and the coding requirements of 5.1.1.1. The entire painted identification group shall completely encircle the line, and shall be of sufficient length to allow a clearance of one-half the letter height (see 5.1.3.3) between lettering and color coding on one end and between lettering and unlettered surfaces on the other end. The color coding shall appear on the left hand side of the identification group as depicted in figure 1, and shall be $2 \pm 1/4$ inches wide for lines 4 to 13 inches in diameter, $6 \pm 3/4$ inches for lines larger than 13 inches in diameter. The word group shall be applied as required to enable viewing from the normal point of operation or viewing.

5.1.2 Symbols. Solid black or, as an option, black outlined geometric symbols shall be printed on the tapes to denote functions as indicated in table I. Background shall be white or metallic (silvery or chrome). These symbols shall appear in a repeated pattern, as indicated in figure 2, for the entire length of the tapes. Symbols shall appear on the right-hand side of tapes and shall be approximately 3/16 inches wide and confined to the right of the tape within 1/4 inch from the edge. Symbols may be omitted on bands, tags, or in painted identification.

5.1.3 Wording. Wording denoting function shall be the wording specified under function in table I, or as otherwise approved by the procuring activity

5.1.3.1 Wording on tapes. Letters shall be 3/32 inch high, and shall be printed as shown in figures 1, 2, and 4. There shall be a 1/32 inch vertical space between words when more than one written line is required to complete a statement of function. Such statements shall normally recur at 1/4 inch interval throughout the length of the tape. Lettering shall be black, regardless of the background color.

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5.1.3.2 Wording on tags. Words indicating functions shall be the first word appearing at the top of the tag. Wording on tags shall be of such size as to be clearly legible and compatible to the diameter of the line.

5.1.3.3 Painted words. Letters shall be painted black on a white background, or they may be stenciled. Letters shall be of such size as to be clearly legible and compatible with the size of the lines. Words denoting function shall be the first words appearing in the identification.