

NOT MEASUREMENT  
SENSITIVE

MIL-S-5002D  
AMENDMENT 2  
20 October 1999  
SUPERSEDING  
AMENDMENT 1  
24 March 1994

MILITARY SPECIFICATION

SURFACE TREATMENTS AND INORGANIC COATINGS FOR  
METAL SURFACES OF WEAPONS SYSTEMS

This amendment forms a part of MIL-S-5002D, dated 30 November 1989, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

- 2.1.1: Delete “O-T-620 - Trichloroethane-1,1,1, Technical, Inhibited  
(Methyl Chloroform)”
- \* 2.1.1: Delete “O-T-236 - Tetrachloroethylene (Perchloroethylene), Technical  
Grade  
O-T-634 - Trichloroethylene, Technical”

PAGE 2

- 2.1.1: Delete “MIL-M-6874 - Metal Spraying, Process for  
MIL-T-81533 - 1,1,1-Trichloroethane, (Methyl Chloroform),  
Inhibited, Vapor Degreasing  
MIL-P-83348 - Powder, Plasma Spray”
- Add “MIL-P-85856 - Powder Materials for Flame and Plasma  
Sprayed Coatings”

PAGE 3

- 2.2: Delete “ASTM D3443 - Chloride in Trichlorotrifluoroethane”

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PAGE 4

- \* 3.4.1: Delete entire paragraph and substitute:

“3.4.1 Organic contamination removal. Organic soils shall be removed by emulsion cleaning, semi-aqueous immersion cleaning, alkaline or electrolytic alkaline cleaning (anodic only), solvent immersion, solvent spraying, vapor degreasing (see 3.4.1.2), solvent hand cleaning, or combinations thereof, whichever is more applicable to the nature of the part and soil to be removed. The materials and processes used shall be completely characterized and controlled to ensure no corrosion effects. In vapor degreasing, if an acid condition exists, the use of the vapor degreasing unit shall be discontinued until the acid condition is corrected and available treated parts shall be 100 percent inspected for corrosion effects. Vapor degreasing solvent shall be tested for acid acceptance in accordance with 4.3.1 or as recommended by the process designer or solvent vendor. Parts displaying corrosion effects shall be subject to rejection. Hand cleaning shall be performed using the vapor degreasing solvents or aliphatic hydrocarbons such as aliphatic naphtha conforming to TT-N-95 or acetone conforming to O-A-51. Solvent hand cleaning shall be performed using a lint free cloth. Residues from the cleaning agents shall be thoroughly rinsed off.”

- \* 3.4.1.1: Delete paragraph in its entirety.

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3.4.3: Delete last two sentences and substitute “The completeness of flux removal shall be determined in accordance with the applicable welding, soldering, or brazing specification.”

PAGE 7

3.5.1.2.1, line 3: After “MIL-C-8837,” delete “, or thermal spray coated in accordance with MIL-M-6874.”

PAGE 9

3.5.1.21, line 7: Delete “MIL-P-83348” and substitute “MIL-P-85856.”

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4.3.2: Delete in its entirety.

PAGE 14

- \* 6.11, Key word listing: Delete “Trichloroethylene.”

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NOTE: The margins of this amendment are marked with asterisks to indicate where changes from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

Custodians:

Army – MR  
Navy – AS  
Air Force – 11

Preparing activity:  
Navy – AS

(Project MFFP-0667)

Review activities:

Army – AR, AV, EA, MI  
Navy – OS  
DLA – CC