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SUPERSEDING
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MILITARY STANDARDIZATION HANDBOOK

ADHESIVE BONDING

NO DELIVERABLE DATA REQUIRED BY THIS DOCUMENT

AMSC N/A

FSC 8040

f. Rinse under tap water at service temperature for 2 minutes.

g. Rinse under deionized water at service temperature for 1 minute.

h. Dry at 140°F (60°C) for 30 minutes in preheated air-circulating oven.

i. Wrap the parts in clean kraft paper until ready to bond.

VAST (Vought Abrasive Surface Treatment) The VAST treatment given under 5.3.5.1.17.2 may also be used.

5.3.5.1.14 Tungsten and alloys (including tungsten carbide).

Hydrofluoric-Nitric-Sulfuric Acid Method.(25)(26)

a. Degrease in a vapor bath of trichloroethane

b. Abrade the surface using medium-grit emery paper.

c. Degrease again in trichloroethane.

d. Using equipment constructed of fluorocarbon resin, polyethylene or polypropylene, prepare the following solution:

Hydrofluoric acid, 60%, sp. gr. 1.18	5 pbw
Nitric acid, conc, sp. gr. 1.41	30 pbw
Sulfuric acid, conc, sp. gr. 1.84	50 pbw
Water, distilled	15 pbw

Blend the hydrofluoric acid and the nitric acid with water and then slowly add the sulfuric acid, stirring constantly with a TEFLON or polyethylene rod. Add a few drops of 20% hydrogen peroxide.

e. Immerse for 1-5 minutes in the above solution at room temperature.

f. Rinse under tap water.

g. Finish rinsing in distilled water.

h. Dry in an oven at 160-180°F (71-82°C) for 10-15 minutes.

5.3.5.1.15 Zinc and alloys. The most common use of zinc is in galvanized metals. Zinc surfaces are almost always prepared mechanically.(1)

Abrasion (for general-purpose bonding)

a. Grit- or vapor-blast with 100-grit emery cloth.

b. Vapor-degrease in trichloroethane.

c. Dry at least 2 hours at room temperature, or 15 minutes at 200°F (93°C) to remove all traces of trichloroethane.