

**INCH-POUND**

A-A-51145D

27 July 2001

SUPERSEDING

A-A-51145C

30 April 1992

## COMMERCIAL ITEM DESCRIPTION

### FLUX, SOLDERING, NON-ELECTRONIC, PASTE AND LIQUID

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. **SCOPE.** This commercial item description (CID) covers soldering flux of the standard commercial type which is intended to be used in soldering copper, copper-base alloys, tin plate, carbon steels, alloy steels, corrosion resistant steels, and chromium alloys. This flux is not intended for use in soldering electronic or electrical circuits.

2. **CLASSIFICATION.** The fluxes shall be of the following types and forms. The type and form to be furnished shall be as specified (see 7.3(b)).

Type I - For use with tin-lead solders for joining copper, copper-base alloys, tin plate, carbon steels, alloy steels, and corrosion resistant steels.

Form A - Paste

Form B - Liquid

Type II - For use in soldering chromium alloys.

Form B - Liquid

### 3. SALIENT CHARACTERISTICS

3.1 General requirements. The materials used in compounding the fluxes shall be of a quality necessary to produce a flux to meet the requirements specified herein. The flux shall have uniform consistency, spread or wet easily, and adhere uniformly to metal being soldered. The size of the unit package shall be as specified (see 7.3(c)).

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: Defense Supply Center Richmond (DSCR), ATTN: DSCR-VBD, 8000 Jefferson Davis Highway, Richmond, VA 23297-5610.

AMSC N/A

FSC 3439

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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3.2 Safety. The soldering fluxes shall not emit fumes in sufficient volume to become noxious when heated to soldering temperatures with ventilation equal to four air changes per hour.

3.3 Marking. Each container shall be permanently marked or labeled as to manufacturer, part number, and the following statement: "Not for use on electrical or electronic components". Any flux containing zinc chloride shall have the following information printed on the container: "Contains zinc chloride".

3.4 Performance.

3.4.1 Type I, form A and B. The type I flux shall be capable of protecting copper, copper-base alloys, tin plate, carbon steels, alloy steels, and corrosion resistant steels from oxidation and be capable of reducing and dissolving a thin film of oxides which may be present.

3.4.2 Type II, form B. The type II flux shall be capable of reducing chromium oxide surface films and shall be suitable for use in soldering chromium alloys.

#### 4. REGULATORY REQUIREMENTS

4.1 Recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

4.2 Environmental protection. The item shall meet all applicable Environmental Protection Agency restrictions in effect on the date of the contract. These regulations apply to the emission of materials hazardous to the environment or the user's health and shall be adhered to during the manufacturing, service, transportation, storage, and operation/use of the item.

#### 5. PRODUCT CONFORMANCE PROVISIONS

5.1 Product conformance. The products shall meet the salient characteristics of this commercial item description; conform to the manufacturer's own drawings, specifications, standards, and quality assurance practices; and shall be the same product offered for sale in the commercial marketplace. The Government reserves the right to require proof of such conformance.

5.2. Responsibility for inspection. Unless otherwise specified (see 7.3(d)), the contractor is responsible for the performance of all inspection requirements as specified herein. The Government reserves the right to perform any of the inspections set forth in this description where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

5.3 Responsibility for compliance. All items shall meet the requirements specified herein. The inspection set forth in this description shall become a part of the contractors overall inspection system or quality program. The absence of any inspection requirements in the description shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of

manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

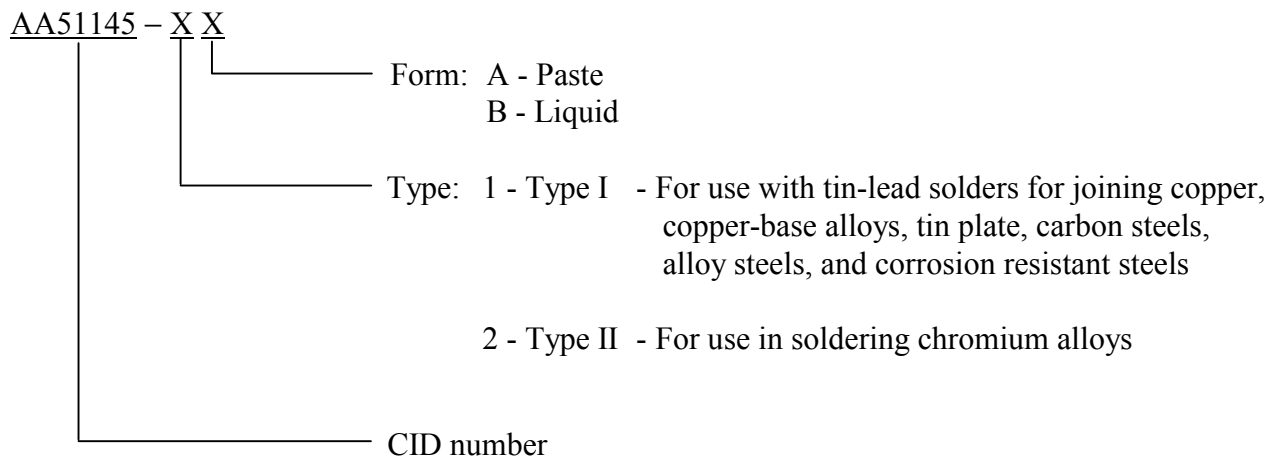
5.4 Quality conformance. Unless otherwise specified (see 7.3(e)), a soldering test shall be performed using a flux sample which is selected from the batch or batches used to fill the requirements of a specific contract. A batch is defined as all the flux of the same type and form produced from the same group of raw materials under essentially the same conditions.

5.5 Soldering test. Three test pieces 2 inches square shall be prepared from sheet chromium alloy. A surface of each test piece shall be cleaned to a bright finish and coated with a thin film of flux from the sample. A pool of 50/50 tin-lead solder shall be melted on the fluxed surfaces. The fluxed area shall be covered with a bright continuous tightly adhering coat of solder without porosity. A copper wire approximately 0.0508 inch in diameter shall be soldered to the center of each piece of metal. Approximately 1/2 inch of wire shall be in contact with the test piece. Tension shall be applied to the wire in a direction parallel to the solder plane until the wire breaks. Failure of the wire outside of the solder joint shall be indicative of an acceptable flux. Failure of the solder joint shall be cause for rejection of the flux.

6. **PACKAGING**. Preservation, packing, and marking shall be as specified (see 7.3(f)) in the contract or purchase order.

## 7. NOTES

7.1 Part or identification number (PIN). The following PIN procedure is for government purposes and does not constitute a requirement for the contractor.



## 7.2 Sources of documents.

7.2.1 FAR. A copy of the FAR may be obtained from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.

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7.3 Ordering data. Acquisition documents must specify the following:

- a. Title, number, and date of this document.
- b. Type and form of flux required (see 2).
- c. Size of unit package (see 3.1)
- d. Responsibility for inspection, if different (see 5.2).
- e. Quality conformance, if different (see 5.4).
- f. Packaging requirements, as specified (see 6).

7.4 Caution. Flux furnished under this CID may be corrosive. Flux residue should be removed according to the manufacturer's recommendation.

MILITARY INTERESTS:

Custodians:

- Army - AR
- Navy - SH
- Air Force - 99

Reviewers:

- Army - AT, EA, MI
- Navy - MC
- Air Force - 84

CIVIL AGENCY  
COORDINATING ACTIVITY:

GSA - 6FEE

Preparing activity:

DLA - GS6

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