A-A-51145A
January 3, 1991
SUPERSEDING
A-A-51145
July 15, 1985

COMMERCIAL ITEM DESCRIPTION

FLUX, SOLDERING, PASTE AND LIQUID

The General Services Administration has authorized the use of this commercial item description.

Abstract. This description 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.

Classification. This description covers soldering fluxes of the following types and forms. The type and form to be furnished for a specific procurement, shall be as specified (see ordering data).

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.

Salient characteristics.

1. Materials. The materials used in compounding the fluxes shall be of a quality necessary to produce a flux to meet the requirements specified herein.

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.

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: Defense Industrial Plant Equipment Center, ATTN: DIPEC-SSG, 2163 Airways Blvd., Memphis TN 38114-5051.

AMSC N/A FSC 3439

3. Marking. Each container shall be permanently marked or labeled as to manufacturer and instructions for use. Any flux containing zinc chloride shall have the following information printed on the container, "Contains zinc chloride".

4. Performance.

Type I, forms A and B. The type I flux shall be capable of protecting copper, copper-base alloys, tin plate, carbon steel, alloy steels, and corrosion resistant steels from oxidation and be capable of reducing and dissolving a thin film of oxides which may be present. The form A flux shall be of uniform consistency, shall spread easily, and adhere uniformly. The form B flux shall wet easily and adhere to clean metal.

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. Form B flux shall wet easily and adhere to clean metal.

Regulatory requirements. In accordance with section 23.403 of the Federal Acquisition Regulations, the Government's policy is to acquire items composed of the highest percentage of recoverable materials practicable, consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing suppliers' employees to undue hazards from the recovered materials.

Environmental protection. During the manufacture of the flux, materials hazardous to the ecological system as prohibited by the Federal, state, or local statutes in effect on the date of the contract shall not be used or emitted.

Preservation, packaging, packing, labeling, and marking. Preservation, packaging, packing, labeling, and marking shall be as specified in the contract or order.

Quality assurance.

Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection, examination, and test requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use their own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections, examinations, or tests set forth in this description where such inspections, examinations, and tests are deemed necessary to assure supplies and services conform to prescribed requirements.

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.

Quality conformance. Unless otherwise specified, 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.

Soldering test, type I, forms A and B. Test pieces 2 inches square shall be prepared from sheet copper, tin plate, and carbon steel. A surface of each of the test pieces shall be cleaned to a bright finish and coated with a thin film of the 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 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.

Soldering test, type II, form B. 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 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.

NOTES.

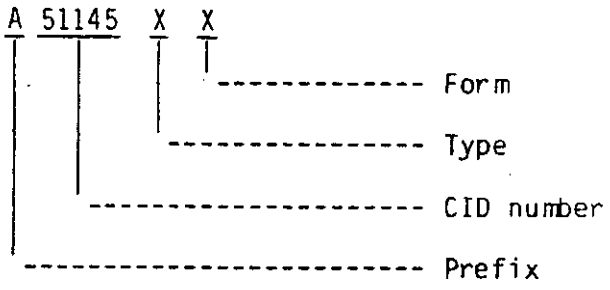
Ordering data. Purchasers should select the preferred options permitted herein, and include the following information in procurement documents:

a. Title, number, and date of this commercial item description.

b. Type, form, and quantity required.

c. Size of unit package.

CID based part identification number. The following part identification numbering procedure is for Government purposes and does not constitute a requirement for the contractor. Where applicable, Arabic numbers shall be substituted for Roman numerals.



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

Cross-reference data. The types and forms of flux found in this CID correspond to the types and forms formerly covered by Federal specification O-F-506C which has been cancelled.

MILITARY INTEREST:

Custodians

Army - AL
Air Force - 99

Review Activities

Army - MI, EA
Air Force - 84
DLA - GS

User Activities

Army - AT
Navy - MC

CIVIL AGENCY COORDINATION ACTIVITY:

GSA - FSS

PREPARING ACTIVITY:

DLA - IP

Project 3439-0751

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER	2. DOCUMENT DATE (YYMMDD)
	A-A-51145A	91 01 03

3. DOCUMENT TITLE

FLUX, SOLDERING, PASTE AND LIQUID

4. NATURE OF CHANGE *(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)*

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)	b. ORGANIZATION	
c. ADDRESS (Include Zip Code)	d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (If applicable)	7. DATE SUBMITTED (YYMMDD)

8. PREPARING ACTIVITY

a. NAME	b. TELEPHONE (Include Area Code)	
Defense Industrial Plant Equipment Center ATT[illegible] DIPEC-SSG	(1) Commercial (901)775-4749	(2) AUTOVON 683-4749
c. ADDRESS (Include Zip Code) 2163 Airways Blvd. Memphis, TN 38114-5051	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466	