

[INCH-POUND]  
A-A-50493A  
August 21, 1998  
SUPERSEDING  
A-A-50493  
February 19, 1990

## COMMERCIAL ITEM DESCRIPTION

### OIL, PENETRATING (FOR LOOSENING FROZEN METALLIC PARTS)

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 two types of penetrating oil for freeing of corroded and frozen metallic parts resisting movement, without causing damage to such parts. The penetrating oil is applied to metal surfaces to break down rust and corrosion, reduce friction, and retard corrosion.

2. **CLASSIFICATION.** The penetrating oil shall be of the following types as specified (see 7.3):

2.1 Type.

Type I - Liquid application (brush, dip, or spray).

Type II - Aerosol application.

3. **SALIENT CHARACTERISTICS.**

3.1 Materials. The penetrating oil is a synthetic oil or light mineral oil, or a mixture of these oils, with or without additives.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Officer in Charge (Code 15E2) Seabee Logistics Center, 4111 San Pedro St., Port Hueneme, CA 93043-4410, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.
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### 3.2 Performance.

3.2.1 Pour point. The penetrating oil shall have a pour point of not greater than - 14 degrees Fahrenheit (°F) (- 25 degrees Celsius (°C)) in accordance with ASTM D 97.

3.2.2 Viscosity. The penetrating oil shall have a viscosity of 1.7 to 10 centistokes at 104 °F (40 °C) in accordance with ASTM D 445.

3.2.3 Flash point. Penetrating oil with a kinematic viscosity of 1.7 to 5.5 centistokes at 104 °F (40 °C) shall have a flash point of not greater than 110 °F (43 °C) in accordance with ASTM D 56. Penetrating oil with a kinematic viscosity greater than 5.5 centistokes at 104 °F (40 °C) shall have a flash point of not less than 110 °F (43 °C) in accordance with ASTM D 93.

3.2.4 Water. The penetrating oil shall have 0.0 percent water content in accordance with ASTM D 95.

3.2.5 Corrosion. The penetrating oil shall have no corrosion in accordance with FED-STD-791, method 5306. The requirements for emulsification of samples and the subsequent addition of distilled water shall be eliminated when not applicable.

3.2.6 Surface tension. The penetrating oil shall have a surface tension of not greater than 44 dynes per square centimetre (4.4 pascal (Pa)) in accordance with ASTM D 3825.

3.2.7 Interfacial tension. The penetrating oil shall have an interfacial tension of not greater than 33 dynes per square centimetre (3.3 Pa) in accordance with ASTM D 971.

3.3 Propellant. The propellant used in the type II aerosol container shall be composed of one of the following gases: carbon dioxide, nitrous oxide, or nitrogen. The propellant shall be capable of propelling all oil in the container and shall be nonflammable in accordance with 49 CFR 173.000, DOT Regulations.

3.4 Workmanship. The penetrating oil shall be free from dirt, sediment, disagreeable odors, or other foreign matter as determined by visual and olfactory examination.

## 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 Hazard Communication Standard. The contractor shall certify that no carcinogenic or potentially carcinogenic constituents are present in the penetrating oil in accordance with the Hazard Communication Standard (29 CFR 1910.1200). The contractor shall provide certification to this effect to the contracting officer or the contractor's designated representative.

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4.3 Toxicity. Types I and II penetrating oil shall have no adverse affect on the health of personnel when used for intended purposes.

### 5. QUALITY ASSURANCE PROVISIONS.

5.1 Product conformance. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this commercial item description, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market. The government reserves the right to require proof of such conformance.

5.2 Responsibility for inspection. The contractor is responsible for the performance of all inspections (examinations and tests).

5.3 Market acceptability (MA). The contractor shall provide products which have a proven market record based on the number of items sold, length of time the product has been on the market, and reliability and performance of the product (see 7.3).

5.4 Inspection and testing. The inspection and testing of products to be supplied under this CID shall be specified in the contract or order (see 7.3).

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

### 7. NOTES.

7.1 Intended use. The penetrating oil is applied to metal surfaces to break down rust and corrosion, reduce friction, and retard corrosion.

7.2 Source of documents.

7.2.1 The Code of Federal Regulations (CFR) and Federal Acquisition Regulation (FAR) may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

7.2.2 Copies of FED-STD-791 required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.

7.2.3 ASTM Standards are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

7.3 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this CID.
- b. Type (see 2.).

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- c. Quantity required.
- d. Unit of issue required.
- e. When this CID is used for procurement, the certification clause must appear in the solicitation.
- f. Applicable market acceptability requirements (see 5.3).
- g. Inspection and testing levels required (see 5.4).
- h. Selection of applicable packaging requirements and container (see 6.1).

7.4 Definitions.

7.4.1 Standard commercial product. A product which has been sold or is being currently offered for sale on the commercial market through advertisements or manufacturer's catalogs, brochures, and represents the latest production model.

7.5 National Stock Numbers (NSNs). The following is a list of NSNs assigned which correspond to this CID. The list may not be indicative of all possible NSNs associated with the CID.

<u>NSN</u>	<u>Type</u>	<u>Container size</u>
9150-00-261-7899	I	1-pint can
9150-00-223-4119	I	1-gallon can
9150-00-852-4659	I	55-gallon drum
9150-00-529-7518	II	16-ounce aerosol

7.6 Part Identification Number (PIN). The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor. The PIN to be used for items acquired to this CID is created as follows:

	AA50493A	X
CID number _____		
Type code (see 2.) _____		

7.7 Metric units. The values stated in either inch-pound units or SI units are to be regarded separately as standard. Within the text, the SI units are shown in brackets. The values stated in each system are not exact equivalents; therefore, each system should be used independently of the other. Combining values from the two systems may result in nonconformance with the standard.

7.8 Subject term (key word) listing.

Antiseize oil  
Penetrating oil

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MILITARY INTERESTS:

Custodians:

Army - AT

Navy - YD1

Air Force - 68

Review Activities:

Navy - AS

DLA - GS

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

Preparing Activity:

Navy - YD1

(Project 9150-0833)

# 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  
A-A-50493A

2. DOCUMENT DATE (YYMMDD)  
980821

### 3. DOCUMENT TITLE

OIL, PENETRATING (FOR LOOSENING FROZEN METALLIC PARTS)

### 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

G. M. KRALIK

b. TELEPHONE *Include Area Code)*

(1) Commercial 805-982-5741 (2) AUTOVON 551-5741

c. ADDRESS *(Include Zip Code)*

OFFICER IN CHARGE, SEABEE LOGISTICS CENTER  
CODE 15E2R, 4111 SAN PEDRO ST.  
PORT HUENEME, CA 93043-4410

**IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:**

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5203 Leesburg Pike, Suite 1403, Falls Church, VA 22401-3466  
Telephone (703) 756-2340 AUTOVON 289-2340