

[INCH-POUND]
A-A-59318
8 September 1998
SUPERSEDING
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COMMERCIAL ITEM DESCRIPTION

POLISH, METAL, ALUMINUM

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 a metal polish used for polishing unpainted aluminum and aluminum alloy surfaces of aircraft. The abrasive quality of the polish enables it to remove tarnish and produce a high lasting shine. The polish shall not be used on aluminum aircraft surfaces that are to be painted with organic coating materials, unless silicone residue is removed with xylene prior to painting.

2. **CLASSIFICATION.** The metal polish shall be of the following types:

Type I - Liquid. (May be used to polish a surface that will be coated with a waterproof liquid wax.)

Type II - Paste. (May be used at sub-zero temperatures.)

3. **SALIENT CHARACTERISTICS.**

3.1 **Material.** The formulation of the polish shall be optional with the manufacturer except as restricted by the requirements specified herein.

3.1.1 **Toxicity.** The polish shall have no adverse effect on the health of personnel when used for its intended purpose.

3.2 **Physical Properties.** The polish shall conform to the requirements in table I.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any other data which may improve this document should be sent to: Commander, Naval Air Warfare Center Aircraft Division, Code 414100B120-3, Highway 547, Lakehurst, NJ 08733-5100.

A-A-59318

TABLE I. Physical Properties.

Property	Requirement	Test Method or Paragraph
Flash Point, °F (°C), minimum	140 (60)	ASTM-D56
Settling Number, maximum <u>1/</u>	20	3.2.1
Viscosity at 75 ±5 °F (24 ±3 °C), Krebs units <u>1/</u>	50 to 70	ASTM-D562
Low-Temperature Stability	Restorable to original appearance by vigorous shaking or stirring	3.2.2
Abrasive Number, maximum	5	3.2.3

1/ Type I only.

3.2.1 Settling Number (Type I only). Place 50 milliliters (mL) of well-mixed Type I polish in a test tube. Cap the tube and allow it to remain undisturbed in an upright position for 24 hours. After the settling period, invert the test tube repeatedly until the solid matter is dislodged and begins to disperse evenly. Record the number of inversions as the settling number.

3.2.2 Low-Temperature Stability. Place approximately 100 mL of Type I polish or 100 grams of Type II polish in each of two 125-mL wide-mouth Pyrex jars and stopper the jars. Set aside one of the jars at 70 to 77 °F (21 to 25 °C) for the duration of the test period as a control sample. Place the second jar containing the test sample in a cold box maintained at 14 ±4 °F (-10 ±2 °C) for 2 hours. At the end of the 2-hour period, remove the jar from the cold box and immerse it in a water bath maintained at 117 ±2 °F (47 ±1 °C) for 1 hour. Remove the jar from the water bath, dry, and again place it in the cold box at 14 ±4 °F (-10 ±2 °C) for 2 hours. At the end of the second 2-hour period, remove the jar from the cold box and immerse it in the water bath maintained at 117 ±2 °F (47 ±1 °C) for 1 hour. Remove the jar from the water bath, dry, and again place it in the cold box at 14 ±4 °F (-10 ±2 °C) for a third 2-hour period. At the end of this period, remove the jar from the cold box and allow it to remain at room temperature for 16 hours. For Type I polish, shake the jar containing the test sample vigorously by hand; for Type II polish, stir the contents of the jar. Compare the appearance of the test sample to the control sample.

3.2.3 Abrasive Number. Clean and weigh two 0.05- by 3- by 6-inch aluminum panels conforming to QQ-A-250/5. Cover one of the panels with a thin coating of polish. Place the second panel on the coated panel and rotate 25 times in moderate circular motion. Separate the panels and wipe clean with a soft cloth saturated with acetone. Reweigh and determine the weight loss. Record the weight loss in milligrams as the abrasive number.

3.3 Reflectance. The polish shall be capable of polishing a tarnished aluminum surface to produce a reflectance reading of from 10 to 30 when measured with a reflectometer. The reflectance shall not change over a 24-hour period.

3.3.1 When Type II polish is applied to a tarnished aluminum surface at 0 °F (−18 °C), it shall meet the requirements specified in 3.3.

3.3.2 Polish that has been restored after being temperature cycled as specified in 3.2.2 shall produce a reflectance reading not less than 90 percent of the reflectance reading produced by the low-temperature control sample when applied to a tarnished aluminum surface.

3.4 Ease of Removal and Corrosiveness. Residual polish shall be easily removed from a tarnished aluminum surface that has been polished and dried. There shall be no discoloration or evidence of corrosion after the surface has been wiped clean.

3.5 Water and Salt Spray Resistance (Type I only). Aluminum surfaces treated with Type I polish and coated with a waterproof liquid wax shall resist water and salt spray.

3.6 Storage Stability. The polish shall show no visible evidence of deterioration after storage in ambient conditions for 6 months.

4. REGULATORY REQUIREMENTS.

4.1 Regulatory Requirements. 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 Material Safety Data Sheets (MSDSs). MSDSs shall be furnished in accordance with FED-STD-313. The pertinent Government mailing addresses for submission of data are listed in Appendix B of FED-STD-313.

5. QUALITY ASSURANCE PROVISIONS.

5.1 Product Conformance. The product provided shall meet the salient characteristics of this CID, 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 Market Acceptability. The following market acceptability criteria are necessary to document the quality of the product to be provided under this CID.

5.2.1 The company producing the polish must have been producing a product meeting the requirements of this CID for at least 6 months.

A-A-59318

6. PACKAGING.

6.1 Preservation, Packing, and Marking. Preservation, packing, and marking shall be as specified in the contract or order and 6.1.1.

6.1.1 Marking.

6.1.1.1 Precautionary Markings. The following precautionary markings shall appear on each container:

WARNING: HARMFUL IF INHALED, CAUSES IRRITATION

Avoid breathing vapor.

Avoid contact with eyes, skin, and clothing.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

6.1.1.2 Directions for Use. The manufacturer's recommendations for application of the polish and directions for obtaining optimum results shall be plainly marked on each container.

7. NOTES.

7.1 Source of Documents.

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

7.1.2 The FAR may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-0001.

7.1.3 Federal Standards and Specifications may be obtained from the General Services Administration Specifications Section, Suite 8100, 470 E. L'Enfant Plaza, SW, Washington, DC 20407.

7.2 Ordering Information. The purchaser should select the required options permitted herein and include the following information in procurement documents:

- a. Title, number, and date of this CID.
- b. Type.
- b. Quantity.
- c. Preservation, packing, and marking.

A-A-59318

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

7930-00-266-7131

7930-00-267-1224

7930-00-734-4010

MILITARY INTERESTS:

Custodian:

Army - GL

Navy - AS

Air Force - 11

Review Activities:

Army - AV, MD

Air Force - 84

CIVIL AGENCY COORDINATING ACTIVITY:

GSA/FSS - 10FTE

Preparing Activity:

Navy - AS

(Project 7930-0431)