[NOT MEASUREMENT SENSITIVE]
A-A-59267
21 December 1999
SUPERSEDING
MIL-P-50002B
5 August 1981

COMMERCIAL ITEM DESCRIPTION

PHOSPHATE COATING COMPOUNDS, MANGANESE OR ZINC BASE (FOR FERROUS METALS)

The General Services Administration has authorized the use of this commercial item description as a replacement for MIL-P-50002B for all federal agencies.

1. SCOPE. This commercial item description (CID) covers both manganese and zinc base phosphate coating compounds to be used in the preparation of bath for "heavy" phosphate coating of ferrous metal parts and assemblies.

2. CLASSIFICATION. Phosphate coating compounds shall be of the following types (see 7.5(b)).

Type M - Manganese base phosphate
Type Z - Zinc base phosphate

3. SALIENT CHARACTERISTICS

3.1 General. The phosphate coating compound shall be a uniform liquid, free of sediments and suspended particles, and shall be capable of producing uniform and insoluble coating that is gray to black in color.

3.2 Composition. The phosphate coating compound shall consist of balanced aqueous phosphoric acid solutions of manganese and zinc phosphates, and nitrate accelerator. When determined in accordance with the manufacturer's standard test methods, the compound shall conform to the chemical requirements specified in table I.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any other data which 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 6850

Table I. Chemical requirements.

Component	Type M % by weight, minimum	Type Z % by weight, minimum
Manganese	6.2	-
Zinc	-	3.9
Phosphate	25.0	30.0
Nitrate	1.0	15.0
Nickel	0.1	0.1

3.3 Phosphate coating weight. When determined in accordance with Ford Laboratory Test Methods (FLTM), the coating produced by the phosphate compound prior to any supplementary treatment shall conform to the coating weight requirements specified in table II.

Table II. Phosphate coating weight requirements.

Type	Minimum coating weight (g/m^2)	Test Method
M	16	FLTM AQ 101-01[1], Method A[2]
Z	11	FLTM AQ 101-02[3]

[1] FLTM AQ 101-01, "Determination of Phosphate Coating Weights - Chromic Acid Method".
[2] Substitute 5% stripping solution to be used at approximately 165 ºF.
[3] FLTM AQ 101-02, "Determination of Phosphate Coating Weights Caustic Soda Method".

3.3.1 Coating weight conversions. When it is necessary to express the coating weight in mg/ft^2, the following conversion calculations shall be used.

$$mg/ft^2 = (g/m^2)\ (1000\ mg/g)\ /\ (10.764\ ft^2/m^2)$$

3.4 Corrosion resistance. The phosphate coating compound shall provide corrosion resistance such that bare phosphate coating (without any supplementary treatment) on parts, shall show no signs of corrosion when subjected to a 5 % salt spray (fog) test as described in ASTM B117, "Standard Practice for Operating Salt Spray (Fog) Apparatus". The period of exposure to salt spray test shall be 1.5 hours for Type M products and 2.0 hours for Type Z products.

3.5 Bath operation and controls. The bath concentration, operating temperatures, and immersion time for parts shall be designated by the manufacturer. Control of the chemical content of the phosphate coating solution in bath shall consist of determination of free acid, total acid, and ferrous iron and shall be verified in conformance with the manufacturer's instructions.

3.6 Metal surface treatments. All metal preparation treatments and supplementary coating treatments before and after phosphate coating process of ferrous and similar metals shall be verified with the manufacturer, and shall be applied with the discretion of the use.

4. REGULATORY REQUIREMENTS

4.1 Material safety data sheet (MSDS). Manufacturers shall prepare and submit a MSDS in accordance with FED-STD-313, "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities" and meeting the Code of Federal Regulations (CFR) requirements of 29 CFR 1910.1200, "Hazard Communication".

4.2 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).

5. QUALITY ASSURANCE PROVISIONS

5.1 Product conformance. The products provided shall meet 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 as that which the supplier offers for sale on the commercial market. The government reserves the right to require proof of such conformance.

5.2 Market acceptability. The product offered must have been previously sold either to the government or on the commercial market.

6. PACKAGING

6.1 Preservation, packing, and marking. For acquisition purposes, the products shall be preserved, packed, and marked as specified in the acquisition order (see 7.5(c)).

7. NOTES

7.1 Intended use. Phosphate coating compounds conforming to this CID are intended for use in producing respective phosphate coatings conforming to the requirements of DOD-P-16232, "Phosphate Coating, Heavy, Manganese or Zinc Base (For Ferrous Metals)".

7.2 Sources of documents.

7.2.1 ASTM standards. Copies of ASTM Standards may be obtained from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

7.2.2 FLTM standards. Copies of Ford Laboratory Test Methods may be obtained from Ford Standards Desk, Budco Teleservicing, 660 Woodward #1800, Detroit, MI 48226, Phone: (313) 225-5100.

7.2.3. Government documents. Printed CFR, FAR, military specifications and federal standards may be obtained from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328. Electronic copies of CFR documents may be obtained from http://www.access.gpo.gov. Electronic copies of military specifications and federal standards may be obtained from http://astimage.daps.dla.mil/quicksearch/.

7.3 Part identification number (PIN). The following part identification numbering system for CID A-A-59267 is for government purposes and does not constitute a requirement for the contractor.

AA59267 – X

- X — Classification (M or Z)
- AA59267 — CID number

7.4 National stock number (NSN). The NSNs listed below are assigned for the listed product types (see 2.). Other NSNs may also correspond with this document.

Type	Assigned NSN
Z	6810-00-543-7050
M	6850-00-680-1998

7.5 Ordering data. Acquisition documents must specify the following information:

a. Title, number, and date of this document
b. Product classification, type (see 2.)
c. Packaging requirements (see 6.1)

MILITARY INTERESTS:

Custodians:
Air Force - 11
Army - MR
Navy - SH

Reviewers:
Air Force - 68
Army - AL, EA
Navy - AS

CIVIL AGENCY
COORDINATING ACTIVITY:

GSA - 7FXE

Preparing activity:
DLA - GS

(Project 6850-1197)