

METRIC  
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SUPERSEDING  
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## COMMERCIAL ITEM DESCRIPTION

### CORROSION PREVENTIVE COMPOUNDS, COLD APPLICATION, FOR NEW AND FIELDIED MOTOR VEHICLES AND TRAILERS AND PROTECTION OF STEEL ENCLOSED SPACES

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

1. SCOPE. This commercial item description (CID) covers solvent dispersed corrosion preventive compound referred to herein as "compound" for spray, brush, or dip application on new and fieldied motor vehicles and trailers enclosed spaces. These compounds are not intended to be used on vehicle exterior surfaces in conjunction with or as a replacement for Chemical Agent Resistant Coatings (CARC). It is the responsibility of the cognizant engineering authority to ensure appropriate use.
2. CLASSIFICATION. The compound covered by this CID shall be of the types specified below.
  - Type I - For new motor vehicles and trailers.
  - Type II - For fieldied motor vehicles and trailers.
  - Type III - For steel enclosed spaces on motor vehicles and trailers (same characteristics as Type I, except where indicated below).

Comments, suggestions, or questions on this document should be addressed to U.S. Army CCDC, Ground Vehicle Systems Center, ATTN: Standardization, FCDD-GVS-IES, MS #267, 6501 E. 11 Mile Road, Warren, MI 48397-5000 or send email to [usarmy.detroit.ccdc-gvsc.mbx.standardization@mail.mil](mailto:usarmy.detroit.ccdc-gvsc.mbx.standardization@mail.mil). Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.dla.mil>.

FSC 8030

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### 3. SALIENT CHARACTERISTICS

3.1 Materials. Material composition and manufacturing process selected shall be the prerogative of the contractor as long as all articles submitted to the government fully meet the physical and performance characteristics of this CID. The compound shall consist of a nonvolatile base material dispersed in a petroleum solvent. The use of recovered material made in compliance with regulating requirements is acceptable providing that all requirements of this CID are met (see 4.1).

3.1.1 Safety. The compound shall not contain any substance of a highly toxic nature. The compound shall have no adverse effect on the health of personnel when used for its intended purpose.

3.1.1.1 Aromatic hydrocarbons. The compound shall not contain any benzene or hazardous air pollutants (HAP).

3.1.1.2 Halogenated hydrocarbons. The compound shall not contain any halogenated hydrocarbons.

3.1.1.3 Heavy metals. The compound shall not contain any antimony, arsenic, beryllium, cadmium, cobalt, chromium, cyanide, lead, manganese, mercury, nickel, and selenium.

3.1.1.4 Isocyanates. The compound shall not contain isocyanates.

3.2 Chemical and physical characteristics.

3.2.1 Nonvolatile content.

3.2.1.1 Type I. The percentage by weight of the nonvolatile content shall be established during testing. The nonvolatile content of any succeeding lot shall be within  $\pm 5$  percent (%) of the established value.

3.2.1.2 Type II. The nonvolatile content, expressed as a percentage by weight, shall be established during testing except that the nonvolatile content shall be not less than 52% based on the compound as received as being 100%. The nonvolatile content of any succeeding lot shall be within  $\pm 5$ % of the established value.

3.2.1.3 Weight per liter. The weight per liter, expressed in grams per liter, shall be established during testing. The weight per liter of any succeeding lot shall be within  $\pm 5$  % of the established value in accordance with ASTM D1475.

3.2.1.4 Sulfated ash content. The sulfated ash content, expressed as a percentage by weight, shall be established during testing. When the established value is 0 to 0.5 %, the sulfated ash content of any succeeding lot shall be within  $\pm 0.05$  of the established value. When the established value is 0.51% or higher, the sulfated ash content of any succeeding lot shall be within  $\pm 10$  % of the established value in accordance with ASTM D874.

3.2.2 Water content. The amount of water present in the compound shall be not greater than 1% by weight when tested in accordance with ASTM D95.

3.2.3 Lead content. The amount of lead present in the nonvolatile portion of the compound shall be not greater than 0.015 % by weight when tested in accordance with ASTM D3335.

3.2.4 Flash-point. The flash point of the compound shall be not less than 38 degrees Celsius (°C) (100 degrees Fahrenheit (°F)) when tested in accordance with ASTM D93.

3.2.5 Condition in container. During the expected life span of the product, the compound shall show no settling in a freshly opened full container. There shall be no evidence of lumps, skins, or separation of the solvent.

3.2.6 Color. The color requirements specified herein apply to compounds that are intended only for use on combat or tactical vehicles and trailers.

3.2.6.1 Type I. The compound shall be translucent or the color shall be brown or black. Fluorescent pigments and dyes shall not be used.

3.2.6.2 Type II. The color shall be brown or black. Fluorescent pigments and dyes shall not be used.

3.2.6.3 Type III. The color shall not be grey or silver so it can be distinguished from the bare metal surface. Fluorescent pigments and dyes shall not be used.

### 3.3 Performance.

3.3.1 Film characteristics. When sprayed on a vertical surface in a single back and forth motion to the manufacturer's designated wet film thickness, the compound shall produce a coating which is continuous and uniform upon evaporation of the solvent. The dry film thickness over metal profile of the coating shall be not less than 152 (µm) micrometers (6 mils) and shall vary not more than 12.7 µm (0.5 mil) for type I, and shall be 203 +51 µm (8 +2 mils) for type II. The compound shall not sag at the manufacturer designated wet film thickness.

#### 3.3.2 Creep.

3.3.2.1 Type I. The compound shall show no evidence of creep of 6.4 millimeters (mm) (0.25 inch (in.)) or more on clean test panels. To determine conformance to this Characteristics, two clean test panels with approximately 102 by 305 mm (4 by 12 in.) made of cold rolled steel of commercial quality and a minimum of 0.64 mm (0.025 in.) thick shall be fastened together at the end with a 12.7 mm (0.5 in.) overlap. The compound shall be applied to the top edge of the joint by means of a spatula. The test panels shall remain in a vertical position for 7 days at 25 + 1 °C (77 + 2 °F). Following the test period, the test panels shall be carefully separated and then examined for evidence of creep.

3.3.2.2 Type II. The compound shall show no evidence of creep of 6.4 mm (0.25 in.) or more on mildly corroded test panels made of the same material as in 3.3.2.1. The test panels shall be exposed to a salt fog for 24 hours in accordance with ASTM B117 prior to application of the compound. The compound shall be applied and the panels tested as in 3.3.2.1.

3.3.2.3 Type III. The compound shall show no evidence of creep of 10 mm (0.40 in.) or more on clean test panels when evaluated using the same method as described in 3.3.2.1.

3.3.3 Copper corrosion. The compound shall not be corrosive to copper when tested in accordance with ASTM D130. The test duration shall be 3 hours + 5 minutes and the test temperature shall be 100 +1°C (212 +2°F). The copper strip classification value shall not exceed I-b (slight tarnish, dark orange) as specified in ASTM D130.

3.3.4 Fire resistance. When exposed to a flame for 20 +1 seconds, the compound shall produce a coating which may char, but shall not support combustion for more than 15 seconds after the flame source is removed in accordance with ASTM D1310.

3.3.5 Detergent resistance. The compound shall produce a coating which shall remain intact and continuous after immersion for 10 minutes in a detergent solution of 2.5 grams (g) of sodium lauryl sulfate or equivalent per liter of water at a temperature of 50 +1°C (122 +2°F).

3.3.6 Chip resistance. The compound shall produce a coating which shall resist chipping damage due to stones or other flying objects. To determine conformance to the characteristics, the compound applied to clean test panels as in 3.3.2.1 shall be tested as specified in ASTM D3170. The test temperature shall be 0 +1°C (32 +2°F). The chippage rating value shall be not less than 3A.

3.3.6.1 Type III. These products are only to be applied on enclosed spaces and will not be subject to chipping damage, thus they are not required to demonstrate chip resistance.

3.3.7 Solvent vapor wash resistance. When subject to a normal solvent vapor washing cycle to remove oils, dirt and grime, the compound shall produce a coating which shall resist the washing action of the compound's solvent vapor in enclosed areas, and shall not show any signs of degradation. To determine conformance to the requirement, the compound applied to a suitable surface at the manufacturer's recommended wet film thickness, shall be placed in an enclosed area and subjected to 121 +3°C (250 +5°F) for 15 minutes. Following removal from the heat source, the compound coated surface shall be allowed to cool at room temperature for 15 minutes. There shall be no evidence of sagging, channeling, or removal of the compound from the prepared surface.

3.3.8 Condition to touch. The compound shall produce a coating which shall be dry to touch in 7 days when dried at room temperature.

3.3.8.1 Type III. The compound may remain pliable and tacky after seven days, however, it is considered cured and ready for service within enclosed spaces.

### 3.3.9 Environmental.

3.3.9.1 Low temperature stability. The compound shall remain homogeneous after exposure to temperatures down to -29 °C (-20 °F) for 16 hours +15 minutes.

3.3.9.2 Low temperature sprayability. The Minimum ambient temperature for compound applicability shall be 4 °C (40 °F).

3.3.9.2.1 Type III. The minimum ambient and substrate temperature for compound applicability shall be 10 °C (50 °F).

3.3.9.3 Low temperature flexibility. The compound shall produce a coating which shall be flexible at temperatures down to -29 °C (-20 °F).

3.3.9.4 High temperature sprayability. The maximum ambient temperature for compound applicability shall be 38 °C (100 °F).

3.3.9.4.1 Type III. The maximum ambient and substrate temperature for compound applicability shall be 35 °C (95 °F).

3.3.9.5 High temperature flow resistance. The compound after curing, shall produce a coating which shall not sag when exposed to temperatures up to 149 °C (300 °F) for 2 hours.

3.3.9.6 Salt fog. When applied to a clean surface, the compound shall produce a coating which shall inhibit corrosion and other surface failures when exposed to a 1000 hours salt fog atmosphere in accordance with ASTM B117.

3.3.9.6.1 Specimen preparation. Two steel panels, 100 x 300 x 0.8 mm (4 x 12 x 0.032 in) conforming to and cleaned per ASTM D609 Type 1 Methods B or D, shall be used for each scribed and unscribed set. The test surface of each panel shall be coated to the film thickness specified by the corrosion preventive manufacturers' or suppliers' application procedure. The panel edges and backside of each panel shall be coated with the product under test. The coated panels shall be permitted to air dry for seven days at 25 °C ± 2 (77 °F ± 5).

3.3.9.6.2 Salt fog test procedure. One set each of coated scribed and unscribed panels shall be exposed in salt spray for 1000 hours per ASTM B117. After exposure, the coating shall be stripped from the panels using an appropriate solvent and the surface examined for compliance with the requirement in 3.3.9.6.3.

3.3.9.6.3 Determination of conformance. The test panels shall have no more than three corrosion dots, each larger than 1 mm (0.04 inch) in diameter. The test panels shall also have an ASTM D1654 rating number of not less than 8 in both scribed and unscribed areas. Corrosion at the outer 6.35 mm (0.25 in) of the panel shall not be included in the panel rating.

3.3.9.7 Salt water immersion. The compound shall produce a coating which shall inhibit corrosion when immersed in salt water for 21 days +2 hours. The solution shall contain 27.6 g of sodium chloride per liter of solution and 2.4 g of calcium chloride per liter of solution. The pH of the solution shall be adjusted to a value of 7.8 to 8.2 by the addition of a 5% solution of sodium carbonate. Specimen preparation and method of determination of conformance to the characteristics shall be as specified in 3.3.9.6 for salt fog test.

3.3.9.8 Cyclic environmental conditions. The compound shall produce a coating which shall inhibit corrosion when exposed to cyclic environmental conditions, in accordance with SAE J1959, section 3.12 SCAB Test.

3.3.10 CARC Compatibility. The compound shall be compatible with CARC. To demonstrate conformance with this requirement, the compound shall be applied to the manufacturer's recommended thickness on a surface which has been cleaned, pretreated, primed, and top coated in accordance with MIL-DTL-53072. After a period of at least 8 hours, the compound shall be cleaned and the CARC surface shall be visually inspected. Any evidence of degradation of the CARC (such as discoloration, runs, sags, blisters, blushing, streaks, craters, blotches, brush marks, fish eyes, seediness or pinholes) shall constitute a failure.

#### 4. REGULATORY REQUIREMENTS

4.1 Recovered material. The offeror/contractor is encouraged to use recovered, recycled, bio based, and environmentally preferable materials to the maximum extent practicable, in accordance with paragraph 23.403, 23.404(b) of the Federal Acquisition Regulation (FAR), or the "Sustainable Acquisition" of Executive Order (EO) 13693; as applicable.

#### 5. PRODUCT CONFORMANCE PROVISIONS.

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

5.2 Product conformance. The products provided shall meet the salient characteristics of this commercial item description, conforms 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.

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or ordering data (see 7.2).

#### 7. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

##### 7.1 Source of documents.

7.1.1 Military Specifications are available from <https://quicksearch.dla.mil/>.

7.1.2 FAR sections are available from <https://www.acquisition.gov/browse/index/far>.

7.1.3 EO section may be obtained from <https://www.epa.gov/greeningepa/>.

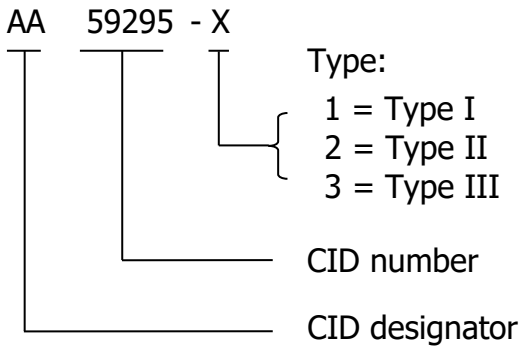
7.1.4 ASTM Standards are available from <https://www.astm.org/Standard/>.

7.1.5 SAE Standards available from <https://www.sae.org/publications>.

7.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this CID.
- b. Type of compound required.
- c. Color required.
- d. Packaging requirements.
- e. PIN number and quantity required.

7.3 Part or identification number (PIN). The following part or identification numbering procedure is for government purposes and does not constitute a requirement for the contractor. The PINs to be used for compounds acquired by this CID are created as follows:



7.4 Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only, and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the previous issue.

7.5 Key words:

CARC  
Sulfate ash  
Lead

MILITARY INTERESTS:

Custodians:

Army - AT  
Navy - YD

Review Activities:

Army - AR, CR4, MR

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

Preparing Activity:  
Army - AT

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