

COMMERCIAL ITEM DESCRIPTION
INK, MARKING, STENCIL, OPAQUE
(POROUS AND NON-POROUS SURFACES)

This Commercial Item Description is approved for use by US Army Armament Research Development and Engineering Center and is available for use by all Departments and Agencies of the Department of Defense.

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

1. Scope: This Commercial Item Description covers four types of opaque ink for marking on porous and non-porous surfaces.

2. Classification:

Type: I. For Use on Non-Porous Surfaces (Non-Pressurized Containers)
II. For Use on Porous Surfaces (Non-Pressurized Containers)
III. For Use on Porous or Non-Porous Surfaces (Pressurized Containers)
IV. For Use on Porous or Non-Porous Surfaces (Stencil Rollers)

Class: A. Standard formulation stencil ink

Class: B. Stencil Ink formulated free of Hazardous Air Pollutants (HAP-free)

3. Salient Characteristics:

3.1 Pigment: The stencil inks shall be made from any pigmentation which will meet the requirements of this commercial item description.

3.2 Vehicle: The vehicle shall be such as to produce a stencil ink conforming to the requirements of this commercial item description.

Comments, suggestions, or questions on this document should be addressed to Commander ARDEC, ATTN: RDAR-QES-E, Picatinny Arsenal, NJ 07806-5000 or emailed to usarmy.pica.ardec.list.ardec-stdzn-branch@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>.

3.3 Effects on Applicators: The stencil inks shall contain no ingredients which have a deleterious effect upon the brush, roller, or spray can used in its application. Inks shall not react with or be reacted upon by the spray can or any of the spray can components. For Class B stencil inks, the applicator is advised to test the stencil ink for compatibility with their application equipment, as it has been observed that HAP-free inks may not be suitable for all types of application equipment. If no Class is specified in the contract or order, Class A shall be used.

3.4 Type III (aerosol cans only):

3.4.1 Propellant: The propellant shall be environmentally safe.

3.4.2 Dispensing Valve: The valve shall have a spray head which can be removed without releasing pressure from the aerosol can. The removable spray head shall contain an orifice of such dimensions as to produce desirable spraying properties.

3.4.3 Agitator: Each dispenser of the pigmented material shall contain one or more agitators in accordance with the manufacturer's commercial standard practice.

3.4.4 Cover Cap: A full cover cap is required and shall visually match the color of the ink.

3.5 Shelf Life: The ink shall be able to meet all the requirements of this specification from the time of delivery to a minimum of 24 months in storage.

3.6 Workmanship: The stencil inks shall be in a homogeneous state, free from foreign matter and shall conform to the levels of quality established herein. The containers (cans, bottles, tubes) shall be in accordance with the manufacturer's commercial practice and shall have no defects that affect serviceability or appearance.

4. 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).

4.1 Toxicity: The use of benzene or carbon tetrachloride solvents and any known carcinogens as ingredients is prohibited. Trace amounts of benzene derivatives present in commercial grades of acceptable aromatics are permissible. Inks shall contain no chlorinated compounds or other toxic hydrolysable chlorine derivatives. The use of any toxic substance must be in accordance with all applicable federal statutes.

4.2 Labeling: Stamp pad ink containers shall be labeled to comply with the "Federal Hazardous Substances Regulations", 16 Code of Federal Regulations Part 1500.

4.3 Material Safety Data Sheets: Safety data sheets 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 Requirements:

5.1 Contractor Certification: The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this commercial item description, and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices. The government reserves the rights to require proof of such conformance prior to first delivery and therefore as may be otherwise provided for under the provisions of the contract.

5.2 Examination and Testing:

5.2.1 Suppliers are encouraged to use quality control (QC) techniques that exhibit control over their processes (e.g. (Statistical Process Control) SPC Techniques) as defined in American National Standards Institute (ANSI) Z1.1, Z1.2, and Z1.3 / American society for Quality Control (ASQC) B.1, B.2, B.3 that systematically reduce excess variations. If used, objective evidence shall be available that demonstrates overall measurement adequacy techniques and controls. These techniques shall ensure quality levels equal to, or greater than, those cited in applicable technical document or, herein.

5.2.2 End item inspection/testing may be used by the offeror or the Government representative, as a means to determine the effectiveness of the in process quality controls. In process controls shall not be substituted for end item performance testing.

5.2.3 For those characteristics for which there are no such controls, or for end item performance test, lot by lot sampling for inspection/test shall be required. The sample unit shall be one can, bottle, tube or container. Sampling shall be in accordance with the American National Standards Institute (ANSI)/American Society for Quality Control (ASQC) Z1.4, Sampling Procedures and Tables for Inspection by Attributes.

5.2.4 An inspection lot shall consist of all like items submitted for inspection at one time. The inspection level for visual examination shall be S-3 with an AQL of 4.0 percent defective. The inspection level for performance tests shall be S-2 with an AQL of 4.0 percent defective. The supplier must provide objective evidence (tests and inspection records) that the presented material meets the requirements of the sampling plan as indicated above.

5.3 Performance Tests:

5.3.1 Drying Opacity (Hiding Power): The dried films of the types I, II and IV stencil inks, shall be applied at a wet-film thickness of 0.002 inch. The type III ink shall be sprayed to a dry film thickness of 0.001 inch. All types shall show the minimum contrast ratios indicated for the respective colors listed in table I, when tested in accordance with ASTM D 2805.

Table I.
Color & Contrast Ratios

Color 1 / _____	Minimum Contrast Ratios _____
White (No. 37875)	0.90
Black (No. 37038)	1.00
Gray (No. 36231)	1.00
Red (No. 31136)	0.80
Yellow (No. 33538)	0.90
Green (No. 34108)	1.00
Blue-Dark (No. 35044)	1.00
Blue-Light (No. 35109)	0.95
Orange (No. 32246)	0.95
Maroon (No. 30111)	1.00
Brown (No. 30117)	1.00
Brown (No. 30140)	1.00
Red (No. 31158)	1.00

_1/ The numbers in parenthesis following color names are identified in Fed. Std. 595.

- 5.3.2 Color (for all types). The color of the stencil inks shall be a general match to the specified color in table I as determined by visual inspection under illumination in accordance with ASTM D 1729. The sample for the test shall be prepared in the following manner: Apply a film of the sample ink at complete hiding to a non-porous panel and allow to dry completely. If the visual inspection described above proves inconclusive, the color variance of ΔE 1.75 maximum, will be considered acceptable.
- 5.3.3 Gloss. For types I, III, and IV stencil ink shall be tested on an absorbent surface and, for type II gloss shall be tested on fiberboard with a maximum gloss reading of 10 being acceptable as tested in accordance with ASTM D 523.
- 5.3.4 Solids. The solids for type III shall be a minimum of 53 grams by weight of the filled aerosol container except black, which shall have a minimum of 45 grams in a nominal one pint container as tested in accordance with ASTM D 2369.
- 5.3.5 Stenciling. The stenciling tests below shall be performed upon the inks under two conditions: as manufactured; and, after storing in an oven for 14 days at 120°F.

<u>The Applicators For Tests Shall Be As Follows:</u>	
Type I & II	Stencil Brush
Type III	Pressurized Spray Can
Type IV	Stencil Roller

In all cases the stencilboard with five letters approximately 3/4 inch high shall be used and the ink shall be stenciled on enameled 7.62 x 15.24 cm (3 x 6 inch, 20 gage) steel panels for types I, III, IV and on 7.62 x 15.24 cm (3 x 6 inch) solid fiberboard panels for types II, III, and IV for the following tests:

5.4 Resistance to Rubbing. Stenciling shall present legible characters of uniform boldness and general appearance and the ink shall not smear 15 minutes after application at 23°C ± 2°C (73.5°F ± 2°F) when rubbed lightly with fingers.

5.5 Resistance to Water. One hour after stenciling, as described above, place the steel or fiberboard panels, as applicable, in distilled water, at 21°C (70°F) for 4 hours. Remove from the water and air-dry for 1 hour. After vigorous rubbing with fingers, the stenciled lettering shall be legible, retain its characteristic color, and shall not smear, crack, or peel.

6. Packaging:

6.1 Preservation, packing, and marking shall be specified in the contract or order.

7. Notes:

7.1 Part Identification Number (PIN). The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor.

This example describes a part numbering system for CID A-A-208D:

A-A-208D	4B
	Class: A. Standard formulation stencil ink
-----	B. Stencil Ink formulated free of Hazardous Air Pollutants (HAP-free)
	Type: 1 – Type I – Non-Porous Surfaces (non-pressurized containers)
	2 – Type II – Porous Surfaces (non-pressurized containers)
	3 – Type III – Porous or Non-Porous Surfaces (pressurized containers)
-----	4 – Type IV – Porous or Non-Porous Surfaces (stencil rollers)

7.2 Applicable Documents. Issues of the following documents, in effect on the date of invitation for bids or request for proposal form a part of this document to the extent specified herein.

7.2.1 Copies of ASTM methods may be obtained from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959 USA.

7.2.2 Federal Acquisition Regulation (FAR) may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

7.2.3 Federal Standards and Specifications may be obtained from the General Services Administration

Specifications Section (3FBO-W) in Suite 8100 at 490 L'Enfant Plaza, SW Washington, DC 20407.

7.2.4 ANSI / ASQC Z1.4 may be obtained from the American society for Quality Control, PO Box 3005, 611 E. Wisconsin Avenue, Milwaukee, Wisconsin 53201-4606.

7.3 Ordering Information. Purchaser should select the required options permitted herein, and include the following information in procurement documents.

- A. Title, number, and date of this commercial item description.
- B. Purchasers shall specify the type and color of ink require.
- C. Purchasers shall specify size of container.
- D. Purchasers shall specify arrangement for inspection and inspection facilities, if other than specified (see tests and quality assurance requirements).
- E. Purchasers shall specify packaging, packing and special marking.
- F. Purchasers shall specify if bar code marking is not required.
- G. Purchasers may specify alternative applicator style, if required.
- H. MSDS required, in addition to those required by FED-STD-313.
- I. Purchasers shall specify palletization, if required.

7.4 National Stock Number Listing.

7510-00-183-7697	7510-00-183-7698	7510-00-419-9564
7510-00-469-7910	7510-00-148-9817	7510-00-161-0809
7510-00-161-0810	7510-00-161-0811	7510-00-161-0812
7510-00-161-0813	7510-00-161-0814	7510-00-161-0815
7510-00-161-0816	7510-00-161-0818	7510-00-180-6175
7510-00-224-6732	7510-00-224-6733	7510-00-224-6734
7510-00-224-6735	7510-00-224-6738	7510-00-224-6740
7510-00-224-6741	7510-00-848-9286	7510-00-848-9286
7510-00-848-9287	7510-00-985-7158	7510-01-081-6273
7510-01-081-6274	7510-01-108-9651	7510-01-291-7538

Custodians:
Army – AR

Preparing activity:
Army – AR
(Project 7510-2014-001)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.