

METRIC

A-A-59665A
11 February 2013
SUPERSEDING
A-A-59665
3 December 2001

COMMERCIAL ITEM DESCRIPTION

MORPHOLINE, TECHNICAL

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

1. **SCOPE.** This commercial item description (CID) establishes the government acquisition requirements for morpholine to be used as a corrosion inhibitor in heating plants where boiler feed water is deaerated.

2. **CLASSIFICATION.** Morpholine shall be classified by classes and sizes specified. The selected class and size of the product to be supplied shall be specified in the acquisition order (see [7.5\(b\)](#)).

2.1 Class.

Class 1 - Morpholine 99.0 percent

Class 2 - Morpholine 91.0 percent

Class 3 - Morpholine 40.0 percent

2.2 Size.

A - 5-gallon can

B - 55-gallon drum

3. SALIENT CHARACTERISTICS

3.1 Material. Morpholine shall be liquid. The physical properties of the three classes are provided in table I.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: STDZNMGT@dla.mil or Defense Logistics Agency - Aviation, ATTN: DLA Aviation-VEB, 8000 Jefferson Davis Highway, Richmond, VA 23297-5610. Since contact information can change, you may want to verify the currency of this address information using the ASSIST database at <https://assist.dla.mil>.

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TABLE I. Physical properties of morpholine.

Property	Class 1	Class 2	Class 3
Specific gravity @ 20° /20 °C	1.002	1.022	1.032
Freezing point, °C	-3	-18	-27
Flash point (TOC) ¹ , °C	38	46	88

¹ Tagliabue open cup.

3.2 Purity. Morpholine shall conform to the purity of table II when tested as specified in 3.3.

TABLE II. Purity requirements for morpholine.

Requirement	Class 1	Class 2	Class 3
Purity, weight %, minimum	99.0	91.0	40.0

3.3 Test method. Into a one-liter volumetric flask, place approximately 14 grams (g) of morpholine, weighed to the nearest 0.01 g. Dilute with distilled water and mix thoroughly until homogeneous. Transfer a 25 milliliter (ml) aliquot to a 250 ml wide mouth Erlenmeyer flask and titrate with standardized 0.1 M-hydrochloric acid against methyl red indicator. Calculate the purity of morpholine by:

$$\% \text{ morpholine} = (M \cdot V \cdot 348.4)/W, \text{ where}$$

M = molarity of hydrochloric acid

V = volume, ml, of hydrochloric acid

W = weight, g, of sample

3.4 Workmanship. Morpholine shall be clear, visibly free from foreign matter, and suitable for the intended use.

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).

5. PRODUCT CONFORMANCE 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 offered for sale in the commercial marketplace. 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.

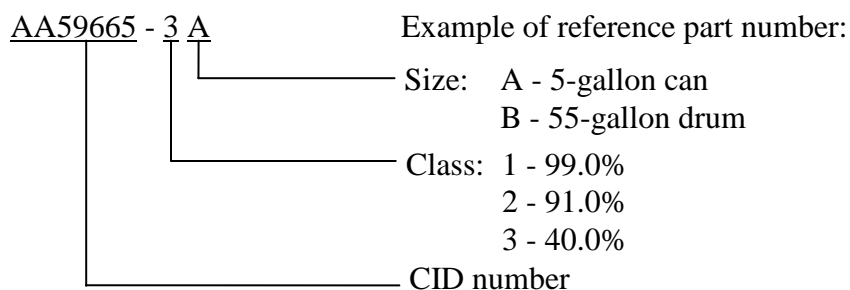
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6. PACKAGING

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 Part or identification number (PIN). The following PIN procedure is for government purposes and does not constitute a requirement for the contractor.



AA59665 - 3 A indicates: a solution that contains a minimum weight of 40 percent morpholine in a 5-gallon can.

7.2 Material safety data sheets. Contracting officers will identify those activities requiring copies of the completed material safety data sheets (MSDS) prepared in accordance with FED-STD-313, "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities". The pertinent government mailing addresses for submission of data are listed in FED-STD-313. The MSDS for each hazardous chemical used in an operation must identify the activities requiring copies of the MSDS as required by 29 CFR 1910.1200, "Hazardous Waste Operations and Emergency Response".

7.3 Sources of documents.

7.3.1 CFR. Copies of CFR may be obtained from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Electronic copies of CFR documents may be obtained from <http://www.access.gpo.gov/>.

7.3.2 FAR The FAR may be obtained from the US Government Printing Office, 732 North Capitol Street N.W., Washington, DC 20401. Electronic copies of FAR documents may be obtained from <http://www.acquisition.gov/far/>.

7.3.2 Federal standards. Copies of federal standards may be obtained from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094. Electronic copies of federal standards may be obtained from <https://assist.dla.mil>.

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7.4 National stock number (NSN). The NSNs listed below are assigned for the listed product types and sizes (see [table I](#)). Other NSNs may also correspond with this document.

<u>NSN</u>	<u>Class</u>	<u>Size</u>
6810-00-419-4298	3	A
6810-00-559-9889	3	B
6810-00-616-9437	2	B

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

- a. CID document number, revision, and CID PIN.
- b. Product class (see [2.1](#)) and size (see [2.2](#)).
- c. Packaging requirements (see [6.1](#)).

7.6 Subject term (keyword) listing.

boiler
corrosion inhibitor
heating plant

MILITARY INTERESTS:

Custodians:
Navy - SH

CIVIL AGENCY
COORDINATING ACTIVITY:

GSA - FAS

Preparing activity:
DLA - GS3

(Project 6810-2013-014)

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 database at <https://assist.dla.mil/>.