

METRIC

A-A-59665

3 December 2001

SUPERSEDING

O-M-575A

12 September 1975

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 7.6(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: Defense Supply Center Richmond (DSCR), ATTN: DSCR-VBD, 8000 Jefferson Davis Highway, Richmond, VA 23297-5610.

AMSC N/A

FSC 6810

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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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 N-hydrochloric acid against methyl red indicator. Calculate the purity of morpholine by:

$$\% \text{ morpholine} = (N \cdot V \cdot 348) / W, \text{ where}$$

N = normality 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.

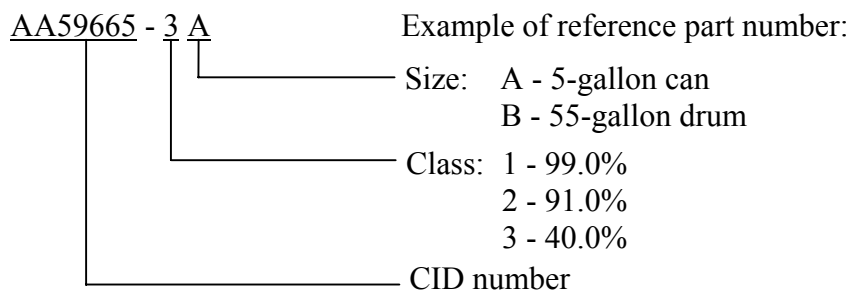
5.2 Market acceptability. The product offered must have been previously sold either to the government or on the commercial market.

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 7.6(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 and FAR. Copies of CFR and FAR 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/>. Electronic copies of FAR documents may be obtained from <http://www.arnet.gov/far/>.

7.3.2 Federal standards. Copies of federal standards may be obtained from General Services Administration, Federal Supply Service, Specification Section, 470 East L'Enfant Plaza SW, Suite 8100, Washington, DC 20407. Electronic copies of federal standards may be obtained from <http://astimage.daps.dla.mil/quicksearch/>.

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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
6810-00-559-9888	1	B
6810-00-559-9889	3	B
6810-00-616-9437	2	B

7.5 Sources of supply. The manufacturers and/or suppliers listed below are known to supply products that meet the salient characteristics requirements of this document. Competition is not limited to the listed firms.

Home Oil Company
Wichita, KS 67201

Magnolia Chemicals and Solvents Company
New Orleans, LA 70123

7.6 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).

7.7 Subject term (keyword) listing.

boiler
corrosion inhibitor
heating plant

CIVIL AGENCY
COORDINATING ACTIVITY:

GSA - 7FXE

Preparing activity:
DLA - GS3

(Project 6810-1692)