

[METRIC]

A-A-59456
18 June 1999
 SUPERSEDING
 MIL-F-14580C
 25 February 1975

COMMERCIAL ITEM DESCRIPTION

FERRIC CHLORIDE, ANHYDROUS, CRYSTALLINE, 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) covers one technical grade of crystalline anhydrous ferric chloride. It is intended for use in water purification.

2. SALIENT CHARACTERISTICS

2.1 Chemical composition. The anhydrous ferric chloride shall conform to table I when tested as follows:

TABLE I. Chemical composition.

Requirement	Percent by weight	
	Minimum	Maximum
Water insolubles, as Fe ₂ O ₃	---	4.0
Ferrous chloride (FeCl ₂)	---	1.0
Ferric chloride (FeCl ₃)	95.5	---

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent by letter 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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2.1.1. Water insolubles. Without undue exposure to air, transfer 4 to 5 grams of ferric chloride to a tared weighing bottle, using a clean paper funnel to prevent ferric chloride from coming in contact with the ground joint. Stopper the bottle immediately, and reweigh the bottle and contents. Wash the specimen into a 500 milliliter (mL) volumetric flask with water, cool to approximately 25 °C, and fill the bottle to the mark with water and shake by hand. Allow the contents to settle for about 10 minutes and then vacuum filter approximately 425 mL of the solution through a tared Gooch crucible, containing an acid-washed asbestos pad, into a dry vacuum flask. Remove the flask containing the filtrate and save the filtrate for succeeding analyses. Replace the vacuum flask with another vacuum flask and filter the remaining solution. Wash the flask with water and add washings to the Gooch crucible. Repeat the washing procedure six times, allowing the filter to pull dry between each washing. Wash the precipitate once with ethyl alcohol. Dry the crucible and precipitate for 30 minutes at 100 °C, heat for 15 minutes at 600 °C, cool in a desiccator to room temperature, and reweigh. All weighings shall be to the nearest milligram (mg). Calculate the percent water insolubles as follows:

$$\text{Percent water insolubles} = \frac{100 A}{B}$$

Where A = Weight of precipitate (weight of crucible with asbestos pad and precipitate minus weight crucible with asbestos pad), and
 B = Weight of sample (weight of weighing bottle and sample minus weight of weighing bottle).

2.1.2 Ferrous chloride (FeCl₂). A sample of the filtrate from 2.1.1 shall have the percentage of ferrous chloride determined in accordance with the procedures of the American Water Works Association (AWWA) Standard for Liquid Ferric Chloride, ANSI/AWWA B407.

2.1.3 Ferric chloride (FeCl₃). A sample of the filtrate from 2.1.1 shall have the percentage of total iron determined, and subsequently the percentage of ferric chloride calculated, when tested in accordance with the procedures of ANSI/AWWA B407.

2.2 Impurities. The ferric chloride supplied shall be certified as suitable for contact with or treatment of drinking water in accordance with the requirements for impurities given in ANSI/AWWA B407.

3. REGULATORY REQUIREMENTS

3.1 Marking, packaging, and labeling. Material shall be labeled, packed, and marked in accordance with Title 49, Code of Federal Regulations (CFR) paragraphs 100 to 185.

3.2 Recycled materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practical, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

3.3 Material safety data sheet (MSDS). The manufacturer shall comply with requirements set forth by the Hazardous Communications Standard 29 CFR, paragraph 1910.1200 (d) through (g).

4. QUALITY ASSURANCE PROVISIONS

4.1 Product conformance. The product 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 market. The government reserves the right to require proof of such conformance.

4.2 Market acceptability. The item offered must have been sold to the Government or commercial market.

5. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order.

6. NOTES. This section contains information of a general or explanatory nature that is helpful, but is not mandatory.

6.1 Source of documents.

6.1.1 The CFR and FAR may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-0001.

6.1.2 Copies of the AWWA standard may be obtained from the American Water Works Association, 6666 West Quincy Avenue, Denver, CO 80235.

6.1.3 Copies of American National Standards Institute standard may be obtained from the American National Standards Institute Inc., 1430 Broadway, New York, NY 10018.

6.2 Ordering data. Acquisition documents must specify the following:

- a. Title, number, and date of this CID.
- b. Unit and quantity required.
- c. Packaging requirements (see 5).

6.3 National stock numbers (NSNs). The following NSNs correspond to this CID: 6810-00-664-0283 and 6810-00-682-6677. These may not be indicative of all possible NSNs associated with this document.

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6.4 Source of supply. The following is a supplier whose products are known to meet the requirements of this CID. Competition is not to be limited to this source.

PVS Technologies
10900 Harper Avenue
Detroit, MI 48213
(313) 571-1100

MILITARY INTERESTS:

Custodians

Army - AT
Air Force - 68
Navy - YD2

Reviewers

Army - MD1, MI
Navy - MC

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - 10FTE

Preparing Activity:

DLA - GS

(Project 6810-1639)