METRIC

A-A-59787A
31 July 2015

SUPERSEDING
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COMMERCIAL ITEM DESCRIPTION

POTASSIUM PERMANGANATE, TECHNICAL (METRIC)

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

1. SCOPE.

1.1 Scope. This commercial item description (CID) covers the requirements for technical grade potassium permanganate. The technical grade potassium permanganate is intended for use in preparing scrubbing solutions for hydrogen and carbon dioxide generators and for treatment of water supplies for potable and industrial use.

2. SALIENT CHARACTERISTICS.

2.1 Appearance. Technical grade potassium permanganate shall be in the form of dark purple crystals, free flowing, and free from any lumps or caking.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data that may improve this document should be sent to: AFPET/PTPS, 2430 C Street, Bldg 70, Area B, Wright-Patterson AFB OH 45433-7631 or e-mailed to AFPA.PTPS@us.af.mil. 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.

AMSC N/A FSC 6810

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

2.2 Assay. The assay shall not be less than 97.0 percent as Potassium Permanganate ($KMnO_4$) when tested as follows:

A 1.580 gram sample of the potassium permanganate analyte, weighed accurately to the nearest milligram, shall be dissolved in distilled water and diluted to exactly 500 milliliters in a volumetric flask. About 0.30 grams of accurately weighed reagent grade sodium oxalate (dried at 105 °C) shall be dissolved in 250 milliliters of dilute sulfuric acid (one volume acid plus 19 volumes distilled water) which has been previously boiled and cooled. From a burette, 39 to 40 milliliters of sample solution shall be added to the oxalate solution at the rate of 25 to 35 milliliters per minute while stirring slowly. The solution shall be allowed to stand until the pink color has disappeared and the solution shall then be heated to 55 °C to 60 °C, and the titration shall be completed by adding the sample solution until a faint pink color persists for 30 seconds. The amount of sample solution consumed shall be corrected by titrating a blank consisting of 250 milliliters of dilute sulfuric acid (one volume acid plus 19 volumes of distilled water) as used above. The assay shall be calculated with the following formula:

$$KMnO_4 \text{ (percent by weight)} = \frac{(149.2)(100)(A)}{(B)}$$

where:

A = weight of sodium oxalate, grams,

B = milliliters of sample solution (corrected).

3. REGULATORY REQUIREMENTS.

3.1 Labeling, packing, and marking. The product shall be labeled, packed, and marked in accordance with Title 49, Code of Federal Regulations (CFR), Parts 100 to 199.

3.2 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).

3.3 (Material) safety data sheets (M)SDS. Contracting officers will identify those activities that require copies of completed (M)SDS prepared in accordance with FED-STD-313. The pertinent Government mailing addresses for submission of the data are listed in FED-STD-313.

4. PRODUCT CONFORMANCE PROVISIONS

4.1 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.

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

5. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order (see 6.2).