

JAN-D-666

20 AUGUST 1948

NATIONAL MILITARY ESTABLISHMENT SPECIFICATION

DINITROCHLORBENZENE

(For Use in Ammunition)

This specification was approved by the Departments of the Army, the Navy, and the Air Force for the use of procurement services of the respective Departments.

A. APPLICABLE SPECIFICATIONS AND OTHER PUBLICATION

A-1. *Specifications.*—The following specifications, of the issue in effect on date of invitation for bids, form a part of this specification:

U. S. ARMY SPECIFICATIONS

50-0-1 General Specification for Ammunition except Small Arms Ammunition.

100-2 Standard Specification for Marking Shipments by Contractors.

A-2. *Other publications.*—The following publication, of the issue in effect on date of invitation for bids, forms a part of this specification:

INTERSTATE COMMERCE COMMISSION REGULATIONS

Regulations for the Transportation of Explosives and Other Dangerous Articles, etc.

B. GRADE

B-1. Dinitrochlorbenzene, covered by this specification, shall be of but one grade as hereinafter specified, and shall consist essentially of $C_6H_3(NO_2)_2Cl$.

C. MATERIAL AND WORKMANSHIP

C-1. See Section E.

D. GENERAL REQUIREMENTS

D-1. See Section E.

E. DETAIL REQUIREMENTS

E-1. *Color.*—Not darker than lemon yellow.

E-2. *Solidification point.*— $50.0^\circ \pm 3.0^\circ C$.

F. METHODS OF SAMPLING, INSPECTION, AND TESTS

F-1. *Size of lot.*—Maximum, 10,000 pounds.

F-2. *Sampling.*—Select 10 percent but in no case more than 10 of the containers comprising the lot. By means of a scoop remove from each selected container sufficient of the material to form a primary sample of about one-half pound. Mix this sample thoroughly, place a 4-ounce portion in a tightly stoppered bottle, and label each primary sample so that the container from which it was taken can be easily identified. Mix the remaining portions of the primary samples thoroughly and quarter until a composite sample

of about $\frac{1}{2}$ pound is obtained. Place the composite sample in a tightly-stoppered bottle and label to show the name of the material, manufacturer, plant, contract or order number, lot number, and number of pounds in the lot. All acceptance tests shall be made on the composite sample representative of the lot. Hold the primary samples for possible future examination should the composite sample fail to meet the requirements.

F-3. *Inspection*.—Inspection shall be made in accordance with U. S. Army Specification 50-0-1 and shall be made at the point of delivery unless otherwise specified in the contract or order.

F-4. *Tests*.—

F-4a. *Color*.—The sample shall be visually inspected for color.

F-4b. *Solidification point*.—Dry 40 to 50 gm. of the sample for four hours at 40°C. Transfer to the inner tube of the apparatus shown on figure 1 and melt. Place the tube in the apparatus and adjust the standardized thermometer so that the bulb is in the center of the liquid with a side thermometer in position for the emergent stem correction. Stir the molten material vigorously by means of the hand stirrer and carefully note the point where the temperature begins to rise when solidification begins. Record the temperature every 15 seconds until the maximum reading is obtained. Correct the maximum temperature for emergent stem by adding the value calculated from the formula:

$$N(T-t) \times 0.00016$$

Where N = degrees in the exposed mercury column

T = the uncorrected solidification point

t = average temperature of the exposed mercury column determined by means of a second thermometer suspended so that its bulb is in the mid point of the exposed mercury column

0.00016 = the coefficient of expansion of mercury in glass.

Record the corrected reading as the solidification point of the sample.

F-5. *Rejection and resubmission*.—If the composite sample fails to comply with any of the specified requirements, the entire lot shall be rejected. The contractor shall have the option of having a partial or complete analysis made on each container in the lot at no expense to the Government. The contractor may then remove defective portions of the lot and resubmit the lot for acceptance.

G. PACKAGING, PACKING, AND MARKING FOR SHIPMENT

G-1. *Packing*.—Unless otherwise specified, dinitrochlorobenzene shall be packed in standard commercial containers, so constructed as to insure acceptance by common or other carriers for safe transportation at the lowest rate, to the point of delivery.

G-2. *Marking*.—In addition to any special marking required by the contract or order or by Interstate Commerce Commission Regulations for the Transportation of Explosives or Other Dangerous Articles, etc., marking shall be in accordance with U. S. Army Specification 100-2.

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II. NOTES

H-1. *Use.*—Dinitrochlorbenzene covered by this specification is intended for use in the manufacture of dinitrophenol and picric acid.

H-2. This specification replaces Picatinny Arsenal Tentative Specification PXS-773.

H-3. Copies of this specification (required for Department of the Army purchases) may be obtained from the Office, Chief of Ordnance, Department of the Army, Washington 25, D. C.

Notice.—When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government Procurement operation the United States Government thereby incurs no responsibility or any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data, is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

ARMY: O.

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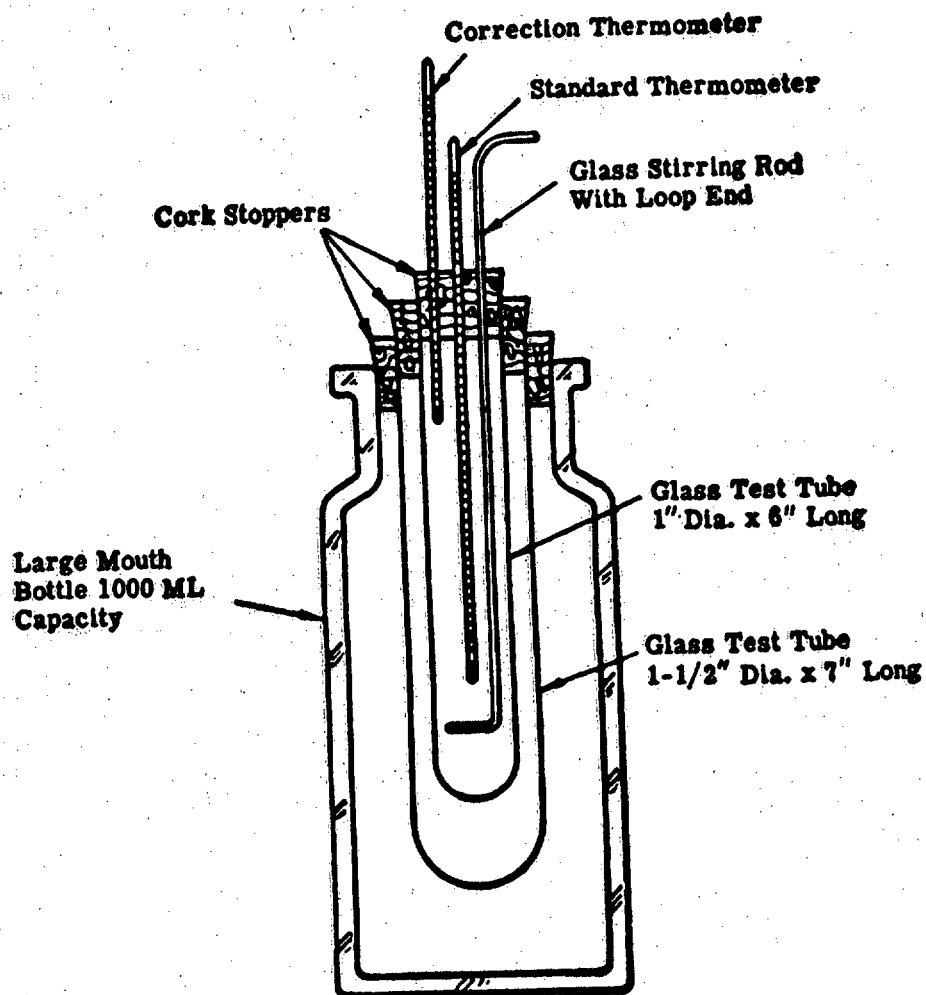


Figure 1.—Solidification—Point apparatus.

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