

Indicator, Humidity, Plug, Color Change

RATIONALE

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Documents

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1. SCOPE:

1.1 This specification establishes requirements for externally mounted color change humidity indicators for determining relative humidity within rigid containers and flexible moisture-vapor-proof envelopes or bags.

1.2 Classification:

Indicator plugs shall be of the following type, as specified (see 6.2).

Type I - For mounting in threaded boss.

Type II - For mounting with self-containing locking device or in threaded boss.

2. APPLICABLE DOCUMENT:

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of the specification to the extent specified herein.

SPECIFICATIONS

Federal

QQ-A-225/5	Aluminum Alloy Bar, Rod, And Wires; Rolled, Drawn, Or Cold Finished, 2017
QQ-A-225/6	Aluminum Alloy Bar, Rod, And Wire; Rolled, Drawn, Or Cold Finished, 2024
UU-P-63	Paper, Blotting
PPP-B-601	Boxes, Wood, Cleated-Plywood
PPP-B-636	Boxes, Shipping, Fiberboard
PPP-P-420	Plugs And Flanges (For Drum Closures)

Military

MIL-P-116	Preservation Methods Of
MIL-B-131	Barrier Material, Water Vaporproof Flexible, Heat Sealable
MIL-P-5425	Plastic, Sheet Acrylic, Heat Resistant
MIL-S-6855	Synthetic Rubber Sheet, Strips, Molded Or Extruded Shapes

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2.1 (Continued):

STANDARDS

Military

MIL-STD-105	Sampling Procedures And Tables For Inspection By Attributes
MIL-STD-129	Marking For Shipment And Storage
MIL-STD-130	Identification Marking Of US Military Property
MIL-STD-171	Finishing Of Metal And Wood Surfaces
MS18013	Indicator, Humidity, Plug, Color Change
MS27215	Plug, Dehydrator, Humidity Indicating, Engine Cylinder, 18MM Thread

DRAWINGS

Ordnance Corps

9129386	Plug, Humidity Indicator
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(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications:

The following document forms a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

UNIFORM CLASSIFICATION COMMITTEE

Uniform Freight Classification Rules

(Application for copies should be addressed to the Uniform Classification Committee, Room 202, Union Station, 516 W. Jackson Blvd., Chicago IL 60606.)

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3. REQUIREMENTS:

3.1 Preproduction testing:

This specification makes provisions for preproduction testing.

3.2 Preproduction sample:

Unless otherwise specified (see 6.2), the contractor shall furnish as soon as practical after the award of contract or order six (6) preproduction samples for inspection. This inspection shall consist of the examination and tests specified in 4.3.1.2 and 4.5 and shall be conducted prior to the submission for acceptance of the remainder of the gages furnished under contract. The preproduction samples shall be identical to the units the contractor proposes to furnish in fulfillment of the contract. These samples will be expended in testing. Approval of preproduction samples shall not relieve the contractor of his obligation to meet the requirements of the specification for the remaining units to be delivered under the contract.

3.3 Materials:

Material used in the manufacture of humidity indicators shall conform to the applicable Government specifications or where Government specification are not involved shall be of higher quality to insure that the indicator plugs meet all the performance requirements specified herein.

- 3.3.1 Metal: Metal components of the humidity plug shall be manufactured from brass or an aluminum alloy conforming to QQ-A-225/5 or QQ-A-225/6. Unless otherwise specified, all metal surfaces not exposed to the contained atmosphere shall be finished with a suitable protection in accordance with MIL-STD-171 such as zinc plating for brass and anodizing for aluminum.
- 3.3.2 Gaskets - O rings: Sealing gaskets shall be manufactured from material conforming to MIL-S-6855, Class II, Grade 60.
- 3.3.3 Spacer - separating washer: The separating washer shall be manufactured from asbestos rubber or any other nonmetallic material which will not affect the environmental requirements of the humidity indicator.
- 3.3.4 Transparent viewer: Material used in the manufacture of the viewing window shall be clear transparent plastic conforming to MIL-P-5425.
- 3.3.5 Indicating element: The relative humidity indicating element shall be manufactured from blotting paper conforming to UU-P-63, Grade B, except the paper shall be white in color, halftone and smooth on both sides. The thickness shall be 0.0185 ± 0.0035 inches. The blotting paper shall be impregnated with a chemically pure cobaltous chloride solution. No chemical additives shall be used except for spots manufactured to change color above 50 percent and under 20 percent relative humidity.