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Standard Specification for Refined Phenol¹

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^{ε1} NOTE—The words “as is” in the table in Section 3.1 were deleted editorially in February 2003.

1. Scope

1.1 This specification covers refined phenol.

1.2 Consult current OSHA regulations and supplier's Material Safety Data Sheets, and local regulations for all materials listed in this specification.

1.3 The following applies to all specified limits in this specification: for purposes of determining conformance with this specification, an observed value or a calculated value shall be rounded off “to the nearest unit” in the last right-hand digit used in expressing the specification limit, in accordance with the rounding-off method of Practice E 29.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

D 1493 Test Method for Solidification Point of Industrial Organic Chemicals²

D 1631 Test Method for Water in Phenol and Related Materials by the Iodine Reagent Method²

D 1686 Test Method for Color of Solid Aromatic Hydrocarbons and Related Materials in the Molten State (Platinum-Cobalt Scale)²

D 3852 Practice for Sampling and Handling Phenol and Cresylic Acid²

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance With Specifications³

¹ This specification is under the jurisdiction of ASTM Committee D16 on Aromatic Hydrocarbons and Related Chemicals and is the direct responsibility of Subcommittee D16.02 on Oxygenated Aromatics.

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² Annual Book of ASTM Standards, Vol 06.04.

³ Annual Book of ASTM Standards, Vol 14.02.

2.2 Other Document:

OSHA Regulations, 29 CFR, paragraphs 1910.1000 and 1910.1200⁴

3. Properties

3.1 Refined phenol shall conform to the following requirements when sampled and tested as described:

| Property | Specification | ASTM Test method |
|--------------------------------|---------------|------------------|
| Water content, max, weight % | 0.10 | D 1631 |
| Solidification point, min, ° C | 40.6 | D 1493 |
| Appearance | ^A | |
| Molten color | ^B | |

^A Molten liquid or crystalline solid, free of sediment and haze.

^B Refined phenol as produced is essentially colorless. Depending upon both the nature and duration of subsequent handling, it may discolor. Therefore, a rigid specification for color is impractical and for many uses it may be unnecessary. In those cases where such a specification is required, its magnitude will vary widely with the intended usage. The required value may be measured using Test Method D 1686. It is further recommended that the directives of Practice D 3852 be strictly followed in any case where color is important.

4. Sampling

4.1 The material shall be sampled and the properties enumerated in this specification shall be determined in accordance with the following ASTM methods:

4.1.1 The specimens shall be placed only in a clean and dry glass container sealed with a screw cap fitted with a polyethylene liner. Rubber, cork, or coated paper closures or liners shall not be used. Special care shall be taken to avoid contact with iron, dirt or moisture. Sampling shall be carried out in accordance with Practice D 3852.

5. Keywords

5.1 phenol

⁴ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401.