



Standard Specification for Muriatic Acid (Technical Grade Hydrochloric Acid)¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers muriatic acid, also known as technical grade hydrochloric acid.

1.2 This specification includes requirements for muriatic acid available commercially in 20° Baumé and 22° Baumé concentration grades.

1.3 The following precautionary caveat pertains only to the test method portion, Section 5, of this specification: *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.*

1.4 Review the current Material Safety Data Sheets (MSDS) for detailed information concerning toxicity, first aid procedures, handling and safety precautions.

2. Referenced Documents

2.1 ASTM Standards:

¹ This specification is under the jurisdiction of ASTM Committee E15 on Industrial and Specialty Chemicals and is the direct responsibility of Subcommittee E15.02 on Product Standards.

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E 224 Test Methods for Analysis of Hydrochloric Acid²
E 300 Practice for Sampling Industrial Chemicals²

3. Requirements

3.1 Muriatic acid shall conform to the following chemical and physical requirements:

	20° Baumé	22° Baumé
Total acidity as HCl, % by weight	30.71 to 32.93	35.02 to 37.14
Fe, ppm	5 max	5 max
Baumé gravity at 15.5/15.5°C	19.60 to 20.80	21.90 to 23.00

4. Sampling

4.1 Sample muriatic acid in accordance with the appropriate sections of Practice E 300 for simple liquids.

4.2 Take composite sample of not less than 1 L.

5. Test Methods

5.1 Determine the requirements as specified in 3.1 using the test procedures described in Test Methods E 224.

6. Keywords

6.1 muriatic acid; technical grade hydrochloric acid

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² Annual Book of ASTM Standards, Vol 15.05.