



Designation: E1120 – 21

# Standard Specification for Liquid Chlorine<sup>1</sup>

This standard is issued under the fixed designation E1120; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

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

## 1. Scope\*

1.1 This specification covers industrial grade chlorine normally available as a liquid in pressurized metal containers.

1.2 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 E29.

1.3 *Units*—The values stated in SI units are to be regarded as standard. The values given in parentheses are for information only.

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

1.5 The following safety hazards caveat pertains only to the test methods listed in Sections 3 and 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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D16 on Aromatic, Industrial, Specialty and Related Chemicals and is the direct responsibility of Subcommittee D16.13 on Chlorine.

Current edition approved July 1, 2021. Published August 2021. Originally approved in 1986. Last previous edition approved in 2016 as E1120 – 16. DOI: 10.1520/E1120-21.

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard’s Document Summary page on the ASTM website.

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E410 Test Method for Moisture and Residue in Liquid Chlorine

E1746 Test Method for Sampling and Analysis of Liquid Chlorine for Gaseous Impurities

### 2.2 Federal Documents:

Federal Specification PPP-C-2020A, Chemicals, Liquid, Dry, and Paste, Packaging of (supersedes PPP-C-2020)<sup>3</sup>

Title 49 CFR, Department of Transportation, Parts 100 to 199<sup>4</sup>

Title 40 CFR, Protection of the Environment, Parts 162 to 180<sup>4</sup>

Title 29 CFR, Labor, Part 1910.1200, New Requirements as to Container Labeling, Occupational Safety and Health Administration (OSHA)<sup>4</sup>

## 3. Chemical Requirements

3.1 Liquid chlorine shall conform to the following requirements:

Properties	Specification	ASTM Test Method
Gaseous impurities, % volume (v/v) (% by vol)	0.5 max	E1746
Moisture, mass % (m/m)	0.015 max	E410
Nonvolatile material, mass % (m/m)	0.015 max	E410

## 4. Sampling

4.1 Sample liquid chlorine in accordance with the appropriate sections of Test Method E1746.

## 5. Packaging and Package Marking

5.1 Package and label industrial and commercial quantities in accordance with Department of Transportation CFR Title 49 Part 100 to 199, and state and local regulations.

<sup>3</sup> Single copies of Federal Specifications required for bidding purposes are available from General Services Administration Business Service Centers in Boston, New York, Washington, DC, Philadelphia, Atlanta, Chicago, Kansas City, MO, Fort Worth, Houston, San Francisco, Los Angeles, and Seattle, WA.

<sup>4</sup> The Code of Federal Regulations may be obtained from the U.S. Government Printing Office, 732 N. Capitol St. NW, Washington, DC 20401, http://www.gpoaccess.gov/CFR/index.html.

\*A Summary of Changes section appears at the end of this standard

5.2 When specified, Department of Defense Procurements shall be packaged and labeled in accordance with the applicable paragraphs of Federal Specification PPP-C-2020A.

5.3 Label chlorine to be used as a pesticide in accordance with the applicable regulations of the Environmental Protection Agency as described in CFR Title 40, Parts 162 to 180.

5.4 Labeling also must comply with OSHA regulations described in CFR Title 29 Part 1910 and Section 1910.1200 as published in 48 Federal Register 53280.

## 6. Keywords

6.1 chlorine; liquid

## SUMMARY OF CHANGES

Committee D16 has identified the location of selected changes to this standard since the last issue (E1120 – 16) that may impact the use of this standard. (Approved July 1, 2021.)

(1) Added 1.2.

(2) Updated 3.1 per D16 Editorial Guidelines “weight % should be corrected to mass %.” Deleted (% by weight) and changed % mass to mass %. Added “Properties” and “Specification” to properties table headings.

(3) Corrected footnotes in 2.2.

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