



Designation: E2680 – 23

# Standard Test Method for Appearance of Clear, Transparent Liquids (Visual Inspection Procedure)<sup>1</sup>

This standard is issued under the fixed designation E2680; 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.

## 1. Scope\*

1.1 This test method describes the visual assessment of the appearance of clear, transparent liquids for clarity and the presence of undesirable components (contamination) such as suspended matter, free water (or oil) and particulates when examined by transmitted light. Measurements requiring instrumentation are not included in this method. This test method was originally designed for application to glycols and methanol wall washes of marine vessels but may be applicable to other clear transparent liquids.

1.1.1 This test method can be used as a field test at storage temperatures or as a laboratory test at room temperatures.

1.1.2 This test method provides a visual appearance description of transparent liquids. It is a qualitative assessment only.

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

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use. Consult current OSHA regulations, suppliers' Safety Data Sheets, and local regulations for all materials used in this test method.*

1.5 *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.*

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D16 on Aromatic, Industrial, Specialty and Related Chemicals and is the direct responsibility of Subcommittee D16.04 on Instrumental Analysis.

Current edition approved Nov. 1, 2023. Published December 2023. Originally approved in 2009. Last previous edition approved in 2016 as E2680 – 16. DOI: 10.1520/E2680-23.

## 2. Referenced Documents

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

E300 Practice for Sampling Industrial Chemicals

D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

D8005 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)

## 3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *appearance, n*—the visual perception of a clear, transparent liquid.

3.1.2 *clear and bright (also referred to as clean and bright), n*—a condition in which the liquid is free of haze, particulates or suspended matter particles.

3.1.2.1 *bright, n*—a condition in which the liquid is transparent with no haze or visible free water (or free oil) in organic (or aqueous) liquids.

3.1.2.2 *clear, n*—a condition in which the liquid contains no visible contaminants (not more than the maximum allowed number of suspended matter particles no greater than 1 mm in diameter or particulates of sufficient size to be easily noted).

3.1.3 *free water (or free oil), n*—water or oil in excess to that soluble in the liquid at ambient temperature which may appear as haze, cloudiness, droplets or a water or oil layer in an organic sample.

3.1.3.1 *Discussion*—For aqueous samples, the determination of free oil is equally important and may have an appearance similar to that of free water or oil in organic samples.

3.1.4 *haze or cloudiness, n*—is a scatter of light from an accumulation of tiny suspended particles in the liquid.

3.1.4.1 *Discussion*—Cloudiness is considered synonymous with haze. Quantification of haze requiring instrumentation is out of the scope of this standard.

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

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