



Designation: D2627 – 08

Standard Specification for Diacetone Alcohol¹

This standard is issued under the fixed designation D2627; 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 (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 This specification covers diacetone alcohol.²

1.2 The following applies to all specified limits in this standard; for purposes of determining conformance with this standard, 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 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.4 For specific hazard information and guidance, consult the supplier’s Material Safety Data Sheet.

1.5 *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:*³

D56 Test Method for Flash Point by Tag Closed Cup Tester
D268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related Coatings and Material

D1078 Test Method for Distillation Range of Volatile Organic Liquids

D1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)

D1296 Test Method for Odor of Volatile Solvents and Diluents

¹ This specification is under the jurisdiction of the ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.35 on Solvents, Plasticizers, and Chemical Intermediates.

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² This compound is also known as 4-hydroxy-4-methyl-pentanone-2.

³ 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.

D1353 Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products

D1364 Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method)

D1476 Test Method for Heptane Miscibility of Lacquer Solvents

D1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products

D1722 Test Method for Water Miscibility of Water-Soluble Solvents

D4052 Test Method for Density, Relative Density, and API Gravity of Liquids by Digital Density Meter

D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

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

E300 Practice for Sampling Industrial Chemicals

2.2 *U.S. Federal Specification:*

PPP-C-2020 Chemicals, Liquid, Dry, and Paste: Packaging of⁴

3. Properties

3.1 Diacetone alcohol shall conform to the following requirements:

Apparent specific gravity	
20/20°C	0.938–0.941 or
25/25°C	0.935–0.938
Color, Pt-Co units, max (Note 3)	25
Distillation, 760 mm Hg	
Initial boiling point, °C, min	135
Dry point, °C, max	172
Nonvolatile matter, g/100 mL, max	0.01
Odor (see Note 1)	nonresidual
Water, wt %, max (see Note 2)	0.1
Acidity (free acid as acetic acid), wt %, max	0.01
Water solubility	miscible with distilled water in all proportions
Flash point, °C, min	62.0

NOTE 1—Optional: Test for odor only when agreed upon as necessary between the purchaser and the supplier.

⁴ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, http://www.dodssp.daps.mil.

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