



AEROSPACE MATERIAL SPECIFICATION

AMS3004

REV. H

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Superseding AMS3004G

Alcohol, Methyl

RATIONALE

AMS3004H has been designated Stabilized because the material and this specification are not likely to incur technical changes.

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AMS3004H has been declared "STABILIZED" by AMS Committee D. This document will no longer be updated and may no longer represent standard industry practice. The last technical update of this document occurred in March 2001.

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1. SCOPE:

1.1 Form:

This specification covers methyl alcohol in the form of a liquid.

1.2 Application:

This product has been used typically as an additive to prevent freezing of water used in aircraft power plant injection systems, but usage is not limited to such applications.

1.3 Safety - Hazardous Materials:

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

- 1.3.1 Precautions: THIS MATERIAL IS A DEADLY POISON IF TAKEN INTERNALLY. It cannot be made nonpoisonous. Avoid prolonged breathing of vapor. It is unlawful to use this fluid in any article of food, beverage, or medicinal or toilet preparation for human use.

2. APPLICABLE DOCUMENTS:

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been canceled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 ASTM Publications:

Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

- ASTM D 86 Distillation of Petroleum Products
- ASTM D 1298 Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method
- ASTM D 4057 Manual Sampling of Petroleum and Petroleum Products

3. TECHNICAL REQUIREMENTS:

3.1 Composition:

Shall be as shown in Table 1; aldehydes plus ketones shall be determined as acetaldehyde in accordance with 4.5.1 or other method acceptable to purchaser.

TABLE 1 - Composition

	Percent Min	Percent Max
Methyl Alcohol	99.0	--
Aldehydes + Ketones (as acetaldehyde) (4.5.1)	--	0.05
Sulfur and Sulfur Compounds (as S)	--	0.03
Acetone	--	0.015
Acidity (as acetic acid)	--	0.01
Esters (as methyl acetate)	--	1.0

3.1.1 Nonvolatile residue shall not exceed 5.0 mg per 100 milliliters.

3.2 Properties:

Alcohol shall conform to the following requirements:

- 3.2.1 Specific Gravity: Shall be 0.7958 to 0.7986 at 15/4 °C (59/39 °F), determined in accordance with ASTM D 1298.
- 3.2.2 Distillation Range: Alcohol shall be completely distilled between 64 and 67 °C (147 and 153 °F), determined in accordance with ASTM D 86.
- 3.2.3 Corrosion: There shall be no evidence of pitting or black stain on freshly-polished 3.5-inch (89-mm) diameter hemispherical copper dish when 100 mL of the alcohol is evaporated to dryness by heating on a steam bath; a slight amount of brown stain is acceptable.
- 3.2.4 Miscibility: Alcohol shall be miscible with distilled water in all proportions.