

# AEROSPACE MATERIAL SPECIFICATION

**SAE AMS3006**

**REV. H**

|            |         |
|------------|---------|
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Superseding AMS3006F

## Alcohol-Water Mixtures

### RATIONALE

AMS3006H results from a five year review of this specification.

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## 1. SCOPE:

### 1.1 Form:

This specification covers mixtures of methyl alcohol and/or ethyl alcohol with water in the form of liquids.

### 1.2 Application:

This alcohol-water mixture 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 Classification:

Alcohol mixtures covered by this specification are classified as follows:

Type 1, Type 2, Type 3, or Type 4 depending on composition as listed in 3.1.

### 1.4 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 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

|          |                          |
|----------|--------------------------|
| AMS 3002 | Alcohol, Denatured Ethyl |
| AMS 3004 | Alcohol, Methyl          |

### 2.2 ASTM Publications:

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

|             |                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------|
| ASTM D 512  | Chloride Ion in Water                                                                                                              |
| ASTM D 516  | Sulfate Ion in Water                                                                                                               |
| ASTM D 1293 | pH of Water                                                                                                                        |
| ASTM D 1298 | Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method |
| ASTM D 1888 | Particulate and Dissolved Matter in Water                                                                                          |
| ASTM D 4057 | Manual Sampling of Petroleum and Petroleum Products                                                                                |
| ASTM E 1    | ASTM Thermometers                                                                                                                  |

## 3. TECHNICAL REQUIREMENTS:

### 3.1 Product:

Mixtures shall be composed of materials conforming to 3.1.1, 3.1.2, and 3.1.3, as applicable, and shall conform to the requirements shown in Table 1. Specific gravity at 15/4 °C (59/39 °F) shall be determined in accordance with ASTM D 1298 and freezing point shall be determined in accordance with 4.5.