

AEROSPACE MATERIAL SPECIFICATION

SAE AMS 3023

Issued Reaffirmed MAY 1995 NOV 2003

FLUID, REFERENCE FOR TESTING POLYOL ESTER (AND DIESTER) RESISTANT MATERIAL

1. SCOPE:

1.1 Form:

This specification covers a trimethylol propane triheptanoate fluid (See 8.1) representative of gas turbine engine oils.

1.2 Application:

This fluid has been used typically to evaluate the ability of elastomeric and other polymeric materials to conform to designated requirements after contact with, or immersion in, MIL-L-7808 and similar lubricants at specified time and temperature as required by the material specification, and its use is limited to such applications. This fluid is not intended for operational use in gas turbine engines (See 8.1).

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.

2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order.

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2.1 SAE Publications:

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

AMS 2825 Material Safety Data Sheets

AMS 3217/4 Test Slabs, Fluoroelastomer (FKM), 65-75

2.2 ASTM Publications:

Available from ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

ASTM D 445	Kinematic Viscosity of Transparent and Opaque Liquids (and the
	Calculation of Dynamic Viscosity)
ASTM D 471	Rubber Property - Effect of Liquids
ASTM D 974	Neutralization Number by Color-Indicator Titration
ASTM D 1298	Density, Relative Density (Specific Gravity), or API Gravity of Crude
	Petroleum and Liquid Petroleum Products by Hydrometer Method
ASTM D 1744	Water in Liquid Petroleum Products by Karl Fischer Reagent
ASTM D 4057	Manual Sampling of Petroleum and Petroleum Products

2.3 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-L-7808 Lubricating Oil, Aircraft Turbine Engine, Synthetic Base

MIL-STD-2073-1 DOD Materiel, Procedures for Development and Application of Packaging

Requirements

3. TECHNICAL REQUIREMENTS:

3.1 Material:

Fluid shall consist of a refined ester base stock and commercial additives to the percentages by weight shown in Table 1. Conformance to Table 2 and Table 3 shall be used in lieu of chemical analysis to validate composition (See 8.2).

TABLE 1 - Composition

Component	min	max
Trimethylol Propane Triheptanoate	95.9	96.1
Tricresyl Phosphate	1.9	2.1
Phenyl-alpha-naphthyl-amine	0.9	1.1
P, P' Dioctyl Diphenylamine	0.9	1.1