



AEROSPACE MATERIAL SPECIFICATION

AMS1740

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Reaffirmed	2015-04

Compound, Alkaline Aqueous Cleaner
Aircraft Turbine Engine Components

RATIONALE

AMS1740 has been reaffirmed to comply with the SAE five-year review policy.

1. SCOPE

1.1 Form

This specification covers an alkaline aqueous cleaner compound in the form of a liquid concentrate or a water-soluble powder for dilution with water.

1.2 Application

This product has been used typically for removing oils, greases, or other soils from aircraft turbine engine parts by immersion in a solution of the compound at elevated temperature or spray cleaned in a parts washer, but usage is not limited to such applications. Restrictions for cleaning titanium parts may be imposed by the engine manufacturer.

1.3 Classification

Compounds conforming to this specification are classified as follows:

Type 1 - Liquid concentrate

Type 2 - Water-soluble powder

1.3.1 Type 1 shall be supplied unless Type 2 is ordered.

1.4 Precautions

Cleaner compound may contain chemicals which, if improperly used, could be hazardous to the health and safety of operators. Protective clothing including eye shields, suitable gloves, and apron should be worn when preparing and using compound. Tanks shall be prepared and operated under conditions of adequate fume extraction and with due regard to the safety recommendations of the manufacturer of the compound together with local workshop safety regulations.

1.5 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.

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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 cancelled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

ARP1755 Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method

2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM D 1568 Sampling and Chemical Analysis of Alkylbenzene Sulfonates
ASTM D 2667 Biodegradability of Alkylbenzene Sulfonates
ASTM F 945 Stress Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials

3. TECHNICAL REQUIREMENTS

3.1 Composition

The composition of the compound shall be optional with the manufacturer except that, when prepared for use, the solution shall be alkaline. When prepared in accordance with manufacturer's instructions, the compound shall form a homogeneous solution, with no solid sediment at room temperature and shall meet the applicable requirements of 3.2.

3.2 Properties

The compound shall conform to the following requirements; tests shall be performed in accordance with specified test methods on the product supplied at the maximum concentration and temperature recommended by the manufacturer.

3.2.1 Stock Loss

Test panels of alloys or electrodeposits shall not incur stock loss exceeding 0.000025 inch (0.635 μm) per surface and plasma deposited coatings shall not incur stock loss exceeding 0.0001 inch (2.5 μm), when tested in accordance with ARP1755, Category 10. Stock loss figures shall be reported for all materials specified in ARP1755, Category 10. Vendor shall indicate where compound is not recommended for particular alloys or coatings.

3.2.2 Surface Attack

Test panels and bars used for the stock loss test of 3.2.1 shall neither exhibit pitting corrosion nor show visual evidence of degradation, when examined at 50X magnification under good oblique surface lighting conditions.