



AEROSPACE MATERIAL SPECIFICATION

AMS3180™**REV. G**

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Superseding AMS3180F

Toluene, Industrial Grade

RATIONALE

AMS3180G has been declared "STABILIZED" by AMS Committee B. This document will no longer be updated and may no longer represent standard industry practice. This document was stabilized because this document covers technology for which the expertise no longer exists in a Technical Committee.

NOTE: Previously this document was reaffirmed in 2010. The last technical update of this document occurred in March, 2001. Users of this document should refer to the cognizant engineering organization for disposition of any issues with reports/certifications to this specification; including exceptions listed on the certification. In many cases, the purchaser may represent a sub tier supplier and not the cognizant engineering organization.

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1. SCOPE:

1.1 Form:

This specification covers, industrial-grade toluene in the form of a liquid.

1.2 Application:

This solvent has been used typically as a thinner for various enamels and primers and may be used in the manufacture of organic protective coatings, 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 Precaution: Toluene is highly flammable. Inhalation of its vapors and lengthy or repeated contact with skin should be avoided (See 5.2).

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 847	Acidity of Benzene, Toluene, Xylenes, Solvent Naphthas, and Similar Industrial Aromatic Hydrocarbons
ASTM D 849	Copper Strip Corrosion by Industrial Aromatic Hydrocarbons
ASTM D 853	Hydrogen Sulfide and Sulfur Dioxide Content (Qualitative) of Industrial Aromatic Hydrocarbons
ASTM D 891	Specific Gravity, Apperent of Liquid Industrial Chemicals
ASTM D 1078	Distillation Range of Volatile Organic Liquids
ASTM D 1209	Color of Clear Liquids (Platinum - Cobalt Scale)
ASTM D 4057	Manual Sampling of Petroleum and Petroleum Products

3. TECHNICAL REQUIREMENTS:

3.1 Properties:

Toluene shall conform to the following requirements; tests shall be performed on the product supplied and in accordance with specified ASTM methods, insofar as practicable:

3.1.1 Specific Gravity at 20/20 °C (68/68 °F): 0.860 to 0.870 ASTM D 891

3.1.2 Distillation: ASTM D 1078

Initial Boiling Point at 760 mm

pressure, minimum

109 °C (228 °F)

Dry Point at 760 mm pressure, maximum

113 °C (235 °F)

Total Distillate, by volume, minimum

97

Aromatic Hydrocarbons, by volume,
minimum

96

3.1.2.1 The distillation range of any specific sample shall be not more than 2 °C (4 °F) from initial boiling point to dry point, which range shall include 110 °C (230 °F).

3.1.3 Copper Corrosion: No corrosion ASTM D 849

3.1.4 Acidity: No free acid ASTM D 847

3.1.5 Sulfur: No free H₂S or SO₂ ASTM D 853

3.1.6 Color: Not darker than No. 20 ASTM D 1209

3.2 Quality:

Toluene, as received by purchaser, shall be clear and free suspended solids, undissolved water, and sediment when examined by transmitted light.

4. QUALITY ASSURANCE PROVISIONS:

4.1 Responsibility for Inspection:

The vendor of the toluene shall supply all samples for vendor's tests and shall be responsible for performance of all required tests. Purchaser reserves the right to sample and to perform any confirmatory testing deemed necessary to ensure that the toluene conforms to the requirements of this specification.

4.2 Classification of Tests:

Tests to determine conformance to all technical requirements of this specification are classified as acceptance tests and shall be performed on each lot.

4.3 Sampling:

Shall be in accordance with ASTM D 4057.

4.4 Approval:

4.4.1 Solvent shall be approved by purchaser before solvent for production use is supplied, unless such approval be waived by purchaser. Results of tests on production solvent shall be essentially equivalent to those on the approved sample.

4.4.2 Vendor shall use ingredients, manufacturing procedures, and methods of inspection on production solvent which are essentially the same as those used on the approved sample solvent. If necessary to make any change in ingredients or in manufacturing procedures, vendor shall submit for reapproval a statement of the proposed changes in ingredients and/or processing and, when requested, sample solvent. Production solvent made by the revised procedure shall not be shipped prior to receipt of reapproval.

4.5 Reports:

The vendor of toluene shall furnish with each shipment a report showing the results of tests to determine conformance to the acceptance test requirement and stating that the solvent conforms to other technical requirements of this specification. This report shall include the purchase order number, AMS 3180G, vendor's identification, lot number, and quantity.