

**SAE** The Engineering Society  
For Advancing Mobility  
Land Sea Air and Space®  
**INTERNATIONAL**

400 Commonwealth Drive, Warrendale, PA 15096-0001

# AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

**SAE**

**AMS-G-952**

Issued

1998-02

## GUNS, SPRAY, OIL AND SOLVENT

### NOTICE

This document has been taken directly from U.S. Military Specification MIL-G-952, Amendment 1 and contains only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards. Any part numbers established by the original specification remain unchanged and may not reflect the document number of the SAE Standard.

The original Military Specification was adopted as an SAE standard under the provisions of the SAE Technical Standards Board (TSB) Rules and Regulations (TSB 001) pertaining to accelerated adoption of government specifications and standards. TSB rules provide for (a) the publication of portions of unrevised government specifications and standards without consensus voting at the SAE Committee level, and (b) the use of the existing government specification or standard format.

Any material relating to qualified product lists has not been adopted by SAE. This material was part of the original military specification and is reprinted here for historic reference only.

#### 1. SCOPE AND CLASSIFICATION:

##### 1.1 SCOPE:

This specification covers hand and air operated, solvent and oil spray guns.

##### 1.2 TYPES:

Guns covered by this specification shall be of the following types:

- Type I Siphon, air operated for use with any fluid container.
- Type II Pressure, air operated with one (1) quart cup attached.
- Type III Pressure, hand operated, one (1) quart capacity.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

Copyright 1998 Society of Automotive Engineers, Inc.  
All rights reserved.

Printed in U.S.A.

**QUESTIONS REGARDING THIS DOCUMENT:**  
**TO PLACE A DOCUMENT ORDER:**  
**SAE WEB ADDRESS:**

(412) 772-7154  
(412) 776-4970  
<http://www.sae.org>

**FAX: (412) 776-0243**  
**FAX: (412) 776-0790**

AMS-G-952

SAE

AMS-G-952

## 2. APPLICABLE DOCUMENTS:

The following publications, of the issues in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

### 2.1 U.S. Government Publications:

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

JPI-12 - Packaging and Packing of Hand Tools  
General Specifications for Inspection of Material

## 3. REQUIREMENTS:

### 3.1 Usage:

The guns covered by this specification shall be designed primarily for the spraying of light oils and solvents.

### 3.2 Corrosion Resistance:

Exposed metal and working surfaces, except when the parts involved are made of corrosion resistant material, shall be coated or covered with an electro-chemical or chemical finish. Exposed metal is defined as metal exposed to the atmosphere, compressed air, or the spraying fluid.

### 3.3 Type I - Component Parts:

The gun shall consist of a handle assembly, with built in air valve, metal fluid and nozzle tube, nozzle retaining nut, nozzle, solvent tubing and connection for air supply.

#### 3.3.1 Construction:

3.3.1.1 **Body and Handle Assembly:** The body and hand assembly shall be of the pistol grip or lever type. It shall be well balanced and shaped to afford a comfortable grip. Side connections for either fluid or air shall not be used. It shall be of sufficient strength to withstand a working pressure of 100 pounds, PSI. The gun shall be provided with a means for suspending the gun from a hook when not in use.

3.3.1.2 **Valve Assembly:** The air valve assembly shall be built into the handle assembly and so designed as to permit easy removal for cleaning and repairing. The air valve seat may be of any commercially acceptable material, and shall not be glycerine treated.

3.3.1.3 **Nozzle Assembly:** The nozzle shall be adjustable by means of a knurled nut which will permit the operator to control the amount of solvent used.

**AMS-G-952****SAE****AMS-G-952**

3.3.1.4 **Nozzle Tube:** The nozzle tube shall be threaded on both ends to provide for attaching to nozzle and handle assemblies and shall be at least 12" long.

3.3.1.5 **Solvent Tubing:** Tubing is to be 6 feet in length, flexible and made of material suitable for the purpose.

3.3.1.6 **Connections:** Air connection shall be a 1/4-18 National Pipe Specification (NPS) male fitting. Solvent hole connections shall be male and of suitable size for the hose furnished.

3.3.1.7 **Operating Pressure:** Air requirements shall not exceed 18.5 CFM at 100 pounds pressure.

#### 3.4 Type II - Component Parts:

The gun shall consist of a handle and body assembly with built in air and fluid valves, curved nozzle tube, tube attaching nut, adjustable nozzle assembly, one quart capacity metal cup and connection for the air supply.

##### 3.4.1 Construction:

3.4.1.1 **Body and Handle Assembly:** The handle shall be of the pistol grip or lever type with air fluid controls on top. It shall be well balanced and shaped to afford a comfortable grip. Side connection for air shall not be used. The unit shall be of sufficient strength to withstand a working pressure of 100 pounds PSI. This assembly is to have a recessed threaded section at the bottom for securing cup to unit. A leather or fiber gasket, treated to prevent hardening, shall be cemented into the recessed threaded section to insure an air-tight joint with the container.

3.4.1.2 **Valve Assembly, Air:** The air valve shall be on top of handle conveniently located to operator's thumb and to open with a slight pressure. It shall be designed to facilitate easy removal for cleaning and repairing. The air valve seat may be of any suitable, commercially acceptable material but not glycerin treated.

3.4.1.3 **Valve Assembly, Fluid:** The fluid valve assembly shall be located on top of handle designed to facilitate easy removal for cleaning and repairing, and to permit complete adjustment of the atomizing air pressure.

3.4.1.4 **Nozzle Tube:** The tube shall be at least 12" long, have a curved end and be adjustment to a full 360 degrees.

3.4.1.5 **Nozzle Assembly:** The nozzle shall be designed to produce a nearly solid stream of fluid or a fine spray by adjusting a knurled control device on the nozzle tip.

3.4.1.6 **Cup Assembly:** The cup shall be not less than on (1) quart capacity and so constructed to withstand 100 pounds PSI working pressure.

3.4.1.7 **Air Connection:** The air connection shall be a 1/4-18 NPS male fitting.

AMS-G-952

SAE

AMS-G-952

### 3.5 Type III - Component Parts:

The gun shall consist of a body assembly with built in trigger design. Nozzle tube, nozzle assembly, nozzle cleaner, pump housing, valve, piston and trigger assembly and one (1) quart capacity fluid container.

#### 3.5.1 Construction:

3.5.1.1 Body and Handle Assembly with Trigger: The body and handle shall be of the pistol grip design. The handle shall be shaped to provide a comfortable grip with the bottom portion recessed and threaded, inside, to accommodate the threaded part of the fluid container. A leather or fiber gasket, treated to prevent hardening, shall be cemented into the recessed threaded section to insure against leakage between body and container.

3.5.1.2 Nozzle Tube: The tube shall be not less than six (6) inches in length, threaded to the body of the unit.

3.5.1.3 Pump Assembly: The pump shall hold prime while not in use.

3.5.1.4 Fluid Container: The container shall be of not less than one (1) quart capacity with the upper portion threaded to screw into threaded part of handle.

#### 3.6 MARKING:

The model number and manufacturer's name shall be permanently identified on each unit.

#### 3.7 Workmanship:

Shall be in accordance with the highest grade commercial practice covering this class of equipment. This shall include accuracy, finish, fit of mating parts and general acceptance.

#### 3.9 Instruction manual:

Each spray gun shall be supplied with an instruction manual showing a complete parts list, functional diagram, and operating instructions.

#### 4. Inspection:

Inspection shall be conducted at the manufacturer's plant in accordance with the General Specification for Inspection of Material, unless other specified by the procuring agency.

#### 5. Preparation for Delivery:

Preservation, packing and marking shall be in accordance with standard commercial practices as they apply to Army-Navy Joint Packaging Instructions JPI-12.