



AEROSPACE STANDARD

AS5942™

Issued 2004-05
Reaffirmed 2025-09

Marking of Electrical Insulating Materials

RATIONALE

AS5942 has been reaffirmed to comply with the SAE Five-Year Review policy.

FOREWORD

This document provides an industry standard for the marking of identification sleeves, wrap-around labels and “tie-on” tags for aerospace vehicle wiring. The performance and test requirements specified in this document provide an acceptable level of legibility and durability that are intended to meet the requirements for wiring systems. The markings specified herein can be applied to sleeves, labels or tags that identify individual wires, cables and wiring harness assemblies. The performance and test requirements for installer-provided identification markings applied directly to wire and cable insulation are specified in AS4373 Method 711.

1. SCOPE:

- 1.1 This specification establishes the performance requirements for the identification of wire and cable by indirect markings that have been applied to electrical insulating materials including heat shrink sleeving, wrap around labels and “tie-on” tags as well as any other types of materials used for indirect marking. This specification covers the processes used to mark these materials, including impact ink marking, thermal transfer, hot stamp, and lasers, etc. This specification does not cover the direct marking on insulated electrical wires and cables.

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Full document details: SAE AS5942

For more information on this standard, visit
<https://www.sae.org/standards/content/AS5942/>

Documents

Standard, visit Sharing Hub

2. APPLICABLE DOCUMENTS:

2.1 Government Documents:

- 2.1.1 Specifications, Standards and Handbooks: Unless otherwise specified, the following Specifications, standards and handbooks, of the issue listed in that issue of the Department of Defense Index of Specification and Standards (DODISS) specified in the solicitation form a part of this specification to the extent specified herein.

FEDERAL SPECIFICATIONS

A-A-132 Erasers, Commercial Item Description

MILITARY STANDARDS

MIL-STD-104 Limits for Electrical Insulation Color

MIL-STD-202 Test Methods for Electronic and Electrical Component Parts

(Copies of federal and military standards and handbooks are available from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.2 Non-Government Publications:

The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation.

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

AS4373 Test Methods for Insulated Electric Wire

AS50881 Wiring, Aerospace Vehicle

AMS-DTL-23053/5 Insulation Sleeving, Electrical, Heat Shrinkable, Polyolefin, Flexible, Cross-linked

AMS-DTL-23053/8 Insulation Sleeving, Electrical, Heat Shrinkable, Polyvinylidene Fluoride, Semi-Rigid, Cross-linked

J314 Felts-Wool and Part Wool

(Application for copies should be addressed to SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

2.3 Order of Precedence:

In the event of conflict between the text of this document and the references cited herein (except for related associated detail specifications, specification sheets, or military standards), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS:

3.1 Pre-production Approval:

When specified by the procuring activity, the marking shall pass the pre-production inspection.

3.2 Identification Code and Spacing Between Markings:

The identification code to be marked on the insulating material and the amount of spacing between markings shall be as specified by the procuring activity (see 6.1).

3.2.1 Color: The marking color shall be as specified by the procuring activity (see 6.1). Colors shall conform to Class 1 of MIL-STD-104.

3.2.2 Printing Type: The printing type for sleeving shall be as specified by the procuring activity in accordance with the requirements of Table 1. Printing type for "tie-on" tags and wrap-around labels shall meet Workmanship requirement as specified in 3.5.

TABLE 1 - Printing Type for Sleeving 1/

Insulation Diameter <u>2/</u>	Nominal Height of Type Face	Reading Direction
.052 to .068	.050	Horizontal
.069 to .096	1/16	Horizontal
.097 to .166	5/64	Horizontal
.167 to .624	7/64	Horizontal
.625 to 1.000	1/8	Horizontal
over 1.00	3/16	Horizontal
<u>1/</u> Dimensions in inches. <u>2/</u> For heat shrinkable sleeving, the height of the type face shall be governed by the "as supplied" insulation diameter.		