



AEROSPACE STANDARD

AS5502™**REV. E**Issued 2000-11
Revised 2022-11

Superseding AS5502D

Standard Requirements for Aerospace Sealants and Adhesion Promoters

RATIONALE

Added requirements for packaging extensions if not packaged or tested for a packaging extension within 90 days of date of manufacturing. Added procedure to allow repackagers to perform second packaging extension.

1. SCOPE

This SAE Aerospace Standard (AS) establishes standard requirements for aerospace sealants and adhesion promoters, which may be incorporated as part of SAE Aerospace Material Specifications (AMS) for such products. This document provides for commonality of methods and procedures for responsibility for inspection, source inspection, classification of tests, establishment of/and qualification to qualified products lists, approval, reports, resampling and retesting, packaging, and marking.

1.1 Safety - Hazardous Materials

While the materials, methods, applications, and processes described or referenced in this standard may involve the use of hazardous materials, this standard 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. Refer to the specific product's Materials Safety Data Sheet (MSDS) or Safety Data Sheet (SDS) for health and safety information.

2. APPLICABLE DOCUMENTS

The following publications form a part of this document 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. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

AMS3100	Adhesion Promoter for Polysulfide Sealing Compounds
AS9100	Quality Management Systems - Requirements for Aviation, Space, and Defense Organizations
AS9120	Quality Management Systems - Requirements for Aviation, Space, and Defense Distributors

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Documents

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2.2 BSI Publications

Available from British Standards Institution, 389 Chiswick High Road, London, United Kingdom W4 4AL, Tel: +44 (0)20 8996 9001, cservices@bsigroup.com.

BS EN 9100	Quality Management Systems - Requirements for Aviation, Space and Defense Organizations
BS EN ISO 10012	Measurement Management Systems Requirements for Measurement Processes and Measuring Equipment
BS EN ISO/IEC 17025	General Requirements for the Competence of Testing and Calibration Laboratories

2.3 ISO Publications

Available from International Organization for Standardization, ISO Central Secretariat, 1, ch. de la Voie-Creuse, CP 56, CH-1211 Geneva 20, Switzerland, Tel: +41 22 749 01 11, www.iso.org.

ISO 10012	Measurement Management Systems - Requirements for Measurement Processes and Measuring Equipment
ISO/IEC 17025	General Requirements for the Competence of Testing and Calibration Laboratories

2.4 PRI Publications

Available from Performance Review Institute, 161 Thorn Hill Road, Warrendale, PA 15086-7527, Tel: 724-772-1616, www.eAuditNet.com.

AC7200/1	Audit Criteria for Sealants for the Sealant Manufacturers' Accreditation Program
AC7200/2	Audit Criteria for Sealants for the Sealant Repackagers' Accreditation Program
AC7200/3	Audit Criteria for Sealants for the Sealant Repackagers' Accreditation Program
PD2000	Governance and Administration of an Industry Managed Product Qualification Program
OP 1114 APP SLT	Nadcap Operating Procedure, Task Group Operation App SLT
OP 2004	QPL Qualification Process
OP 2007 Appendix G9	Additional Requirements for the Aerospace Sealants and Associate Materials (G9) QPG

3. TECHNICAL REQUIREMENTS

For purposes of this standard, sealant shall be synonymous with "sealing compound."

Technical requirements for a specific class of sealant or adhesion promoter shall be defined by the AMS. In case of conflict in requirement(s), the AMS takes precedence over this SAE Aerospace Standard (AS).

3.1 Date of Manufacturing, Date of Packaging, and Conformance Testing

3.1.1 Date of Manufacturing (DOM)

DOM is defined as the last day of initial acceptance tests per 4.2.2 and shall be included on the applicable test report.

3.1.2 Date of Packaging (DOP)

For sealants, the DOP is defined as the date that bulk sealant is packaged from its components, base compound, and curing agent by the manufacturer or value-added distributor (repackager). DOP shall be no more than 90 days from the DOM or the most recent conformance testing per 3.1.3. The material shall be limited to a maximum of two 90-day extensions, and shall be limited to a maximum of 270 days from the DOM.

For adhesion promoters, the DOP is defined as the date that the bulk adhesion promoter is packaged into smaller container sizes per AMS3100, Section 5. (Note: The shelf life of the adhesion promoter is based on the DOM per AMS3100, 3.5.)

3.1.3 Conformance Testing (CT) for Packaging Extensions - Sealant Only

3.1.3.1 First CT Material Extension to 180 Days of DOM

First CT requires performing the final acceptance tests of the applicable AMS and shall begin to be performed toward the end of the 90 days (e.g., from 80 to 90 days) of the bulk material DOM to extend the time to a maximum of 180 days of DOM. The first CT may be performed by the manufacturer or, with the manufacturer's approval, by approved value-added distributors (repackagers). See Figure 1.

3.1.3.2 Second CT Material Extension to 270 Days of DOM

The second CT requires performing the initial acceptance tests of the applicable AMS and shall begin to be performed by the manufacturer toward the end of the 180 days (e.g., from 170 to 180 days) of the bulk material DOM to extend the time to a maximum of 270 days of DOM. With the manufacturer's approval, the tests can be performed by value-added distributors (repackagers) with a third-party accreditation in accordance with AC7200/3. See Figure 1.

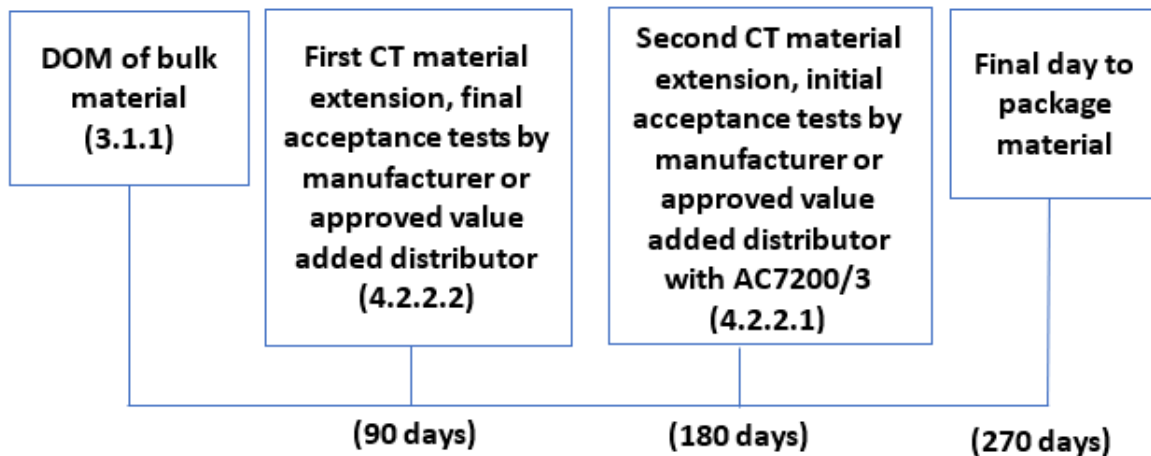


Figure 1

3.1.3.3 CT Material Extension if Tested after 90 days

For the exception that the material was not tested before 90 days per 3.1.3.1, a 90-day extension from the start of the testing requires performing the initial acceptance tests of the applicable AMS and shall be performed by the manufacturer or, with the manufacturer's approval, by value-added distributors (repackagers) with a third-party accreditation in accordance with AC7200/3. After the 90-day extension, the material can be tested again for an extension to a maximum of 270 days of DOM. See Figure 2.