



AEROSPACE STANDARD	AS5502™	REV. D
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Superseding AS5502C		
Standard Requirements for Aerospace Sealants and Adhesion Promoters		

RATIONALE

Updated Source Inspection Requirements and added Calibration Requirements for sealant manufacturers and repackagers. Redefined lot and added testing requirements for a batch or lot of material. Added Mix on Demand Kit Final Acceptance Test requirements.

1. SCOPE

This document establishes standard requirements for aerospace sealants and adhesion promoters, which may be incorporated as part of 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.

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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

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, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, 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.pri-network.org.

AC7200/1 Nadcap Requirements for the Sealant Manufacturers' Accreditation Program

AC7202 Nadcap Requirements for the Sealant Value Added Distributor Accreditation Program

OP 1114 APP SLT Additional Requirements for the Sealants Task Group

PD2000 Governance and Administration of an Industry Managed Product Qualification Program

PD2001 Manufacturer Request for Product Approval and Qualification Process

PD2103 Aerospace Quality Assurance, Product Standards, Qualification Procedure, Sealants

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 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 as dated 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.

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 paragraph 3.5).

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

CT shall be performed within 90 days of the bulk material DOM to extend the time for packaging material. 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. The 1st CT requires performing the Final Acceptance Tests of the applicable AMS. The 1st CT may be performed by the manufacturer or, with the manufacturer's approval, by approved value added distributors (repackagers). The 2nd CT requires performing the Initial Acceptance Tests of the applicable AMS, and shall be performed by the manufacturer within 90 days of the 1st Conformance Testing. The following diagram describes the extension procedure for packaging:

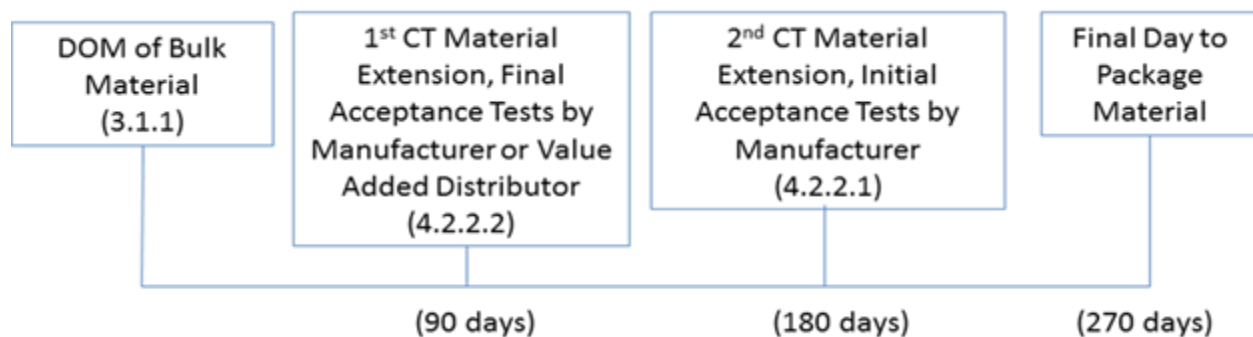


Figure 1

3.2 Toxicological Formulations

The material shall have no adverse effects on the health of personnel when used for its intended purpose in accordance with manufacturer's MSDS or SDS and with appropriate handling procedures. Questions pertinent to this effect shall be referred by the contracting activity to the appropriate medical service who will act as an advisor to the contracting agency.

3.3 Quality

3.3.1 Sealant Quality

The sealant's base compound and curing agent, as received by the purchaser, shall each be of uniform blend and shall be free of excessive air, skins, lumps, and gelled or coarse particles that could interfere with the application of the material and its function. There shall be no separation of ingredients which cannot be easily redispersed.

3.3.2 Adhesion Promoter Quality

The adhesion promoter, as received by the purchaser, when visually examined, shall be uniform in quality and condition, free of sedimentation and turbidity, and free from foreign materials, particulate matter, and other contaminants detrimental to use of the adhesion promoter. Material packaged in aerosol containers may be sprayed into a clear glass container to determine appearance.