



AEROSPACE MATERIAL SPECIFICATION

AMS3092™**REV. B**Issued 2003-03
Revised 2021-12

Superseding AMS3092A

Release Agent,
for Use During Form-in-Place Gasket Preparation

RATIONALE

This document is being revised for its Five-Year Review update. Revised cleanability test and mechanical release test procedures. As an acceptance test, replaced the composition test with the mechanical release test. Removed a note that relates to Federal Supply Classification (FSC) 9150. Added additional informational clarifications.

1. SCOPE

1.1 Form

This specification establishes requirements for solvent-based and water-based release agents, in bulk or aerosol form.

1.2 Usage

The release agents are typically used to provide a release between a sealing compound and forming surface or substrate during preparation of form-in-place (FIP) gaskets, but usage is not limited to such applications.

NOTE: The manufacturer shall provide instructions to ensure adequate coverage and optimal release characteristics.

1.3 Classification

Release agents covered by this specification are classified by composition as follows:

1.3.1 Types

Type I Fluorochemical/fluoropolymer release agents.

Type II Release agents with non-fluorine containing substances as the active ingredients that impart the release properties.

1.4 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 that 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 respective safety data sheets for health and safety information on specific products.

SAE Executive Standards Committee 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 revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2021 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
http://www.sae.org

SAE WEB ADDRESS:

Full document details: SAE AMS3092B

For more information on this standard, visit
<https://www.sae.org/standards/content/AMS3092B>

Documents

Document Sharing Hub

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.

AMS3167	Solvents, Wipe for Cleaning Prior to Application of Primer and Top Coat Materials, or Sealing Compounds
AMS3276	Sealing Compound, Integral Fuel Tanks and General Purpose, Intermittent Use to 360 °F (182 °C)
AMS3819	Cloths, Cleaning, for Aircraft Primary and Secondary Structural Surfaces
AMS4037	Aluminum Alloy, Sheet and Plate, 4.4Cu - 1.5Mg - 0.60Mn (2024; -T3 Flat Sheet, -T351 Plate), Solution Heat Treated
AMS4268	Aluminum Alloy, Sheet and Plate, 4.4Cu - 1.5Mg - 0.60Mn (2024-T81 Sheet, -T851 Plate), Solution Heat Treated, Cold Worked and Artificially Aged
AS5127	Aerospace Standard Test Methods for Aerospace Sealants, Methods for Preparing Aerospace Sealant Test Specimens

2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM C297	Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
ASTM D1193	Standard Specification for Reagent Water
ASTM D3359	Standard Test Methods for Measuring Adhesion by Tape Test
ASTM E1252	Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis

2.3 U.S. Government Publications

Copies of these documents are available online at <https://quicksearch.dla.mil>.

MIL-DTL-81706	Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys
MIL-PRF-22750	Coating, Epoxy, High Solids
MIL-PRF-23377	Primer Coatings, Epoxy, High Solids
MIL-PRF-85285	Coating: Polyurethane, Aircraft and Support Equipment
MIL-PRF-85582	Primer Coatings, Epoxy, Waterborne

2.4 ANSI Accredited Publications

Copies of these documents are available online at <http://webstore.ansi.org/>.

ANSI Z400.1/Z129.1 Hazardous Workplace Chemicals - Hazard Evaluation and Safety Data Sheet and Precautionary Labeling Preparation

2.5 PRI Publications

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

OP 2007 QPG Operation

OP 2007 Appendix G9 Additional Requirements for the Aerospace Sealants and Associated Materials (G9) QPG

PD2000 Governance and Administration of an Industry Managed Product Qualification Program

PRI-QPL-AMS3092 Products Qualified Under AMS3092

3. TECHNICAL REQUIREMENTS

3.1 Material

Type I release agents shall consist of fluoropolymers dissolved or dispersed in solvent or water to meet the requirements of this specification. Fluoropolymers include low molecular weight polytetrafluoroethylene (PTFE) such as fluorotelomers, higher molecular weight PTFE, and non-PTFE fluoropolymers and other fluorochemicals.

Type II release agents shall consist of non-fluorine containing release components in solvent or water to meet the requirements of this specification.

Both types of release agents may contain, in addition to the major active ingredient that imparts release properties, adhesion promoters (binders) or other additives designed to enhance the performance of the release agents. The release agents shall contain no free silicone compounds that can transfer to released parts and interfere with post-finishing operations. There shall be no phase separation in the liquid product.

3.2 Application

Application of the release agent shall be by spray, brush, or wipe techniques per the manufacturer's instructions. Multiple applications of the release agent may be applied to achieve release requirements. To ensure adequate coverage and optimal release characteristics, the release agent should be reapplied each time the forming surface or substrate is used. Curing/drying of release agent shall be per the manufacturer's instructions, with the exception that no heat cure shall be required.

3.3 Film Appearance

When in its cured/dried state, the release agent shall be uniform in appearance and without surface defects. Colorants may be added at the purchaser's request to impart color to the film, provided that they have no detrimental effect on the release or cleanability characteristics of the product.