

# AEROSPACE MATERIAL SPECIFICATION



AMS3571/9

REV. C

|            |         |
|------------|---------|
| Issued     | 1976-07 |
| Revised    | 1991-04 |
| Reaffirmed | 2001-01 |
| Stabilized | 2011-09 |

Superseding AMS3571/9B

Resin, Polyether Urethane (EU) Casting  
Flexible, Solid, Unfilled  
75 Durometer "D"

## RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

## STABILIZED NOTICE

This document has been declared "Stabilized" by SAE AMS P, Polymeric Materials Committee, and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

SAENORM.COM : Click to view the full PDF of AMS3571-9C

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 © 2011 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:

SAE values your input. To provide feedback  
on this Technical Report, please visit  
<http://www.sae.org/technical/standards/AMS3571/9C>

## 1. SCOPE:

### 1.1 Form:

This specification covers one type of polyether-type urethane (EU) resin and hardener which, when mixed and cured, produce elastomeric polyurethane products.

### 1.2 Application:

See AMS 3571.

### 1.3 Classification:

75 Durometer "D".

## 2. APPLICABLE DOCUMENTS:

See AMS 3571.

## 3. TECHNICAL REQUIREMENTS:

### 3.1 Basic Specification:

The complete requirements for procuring the product described herein shall consist of this document and the latest issue of the basic specification, AMS 3571.

### 3.2 Material:

See AMS 3571.

SAENORM.COM : Click to view the full PDF of ams3571\_9c

### 3.3 Properties of Cured Product:

The product, mixed and cured in accordance with manufacturer's instructions, shall conform to the following requirements, determined in accordance with specified test methods:

|         |                                                                                                                                                                                      |                                                           |                  |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------|
| 3.3.1   | Hardness Durometer "D" or equivalent                                                                                                                                                 | 75 ± 5                                                    | ASTM D 2240      |
| 3.3.2   | Tensile Strength, minimum                                                                                                                                                            | 5500 psi (37.9 MPa)                                       | ASTM D 412       |
| 3.3.3   | Elongation, minimum                                                                                                                                                                  | 150%                                                      | ASTM D 412       |
| 3.3.4   | Tensile Stress at 100% Elongation, minimum                                                                                                                                           | 3500 psi (24.1 MPa)                                       | ASTM D 412       |
| 3.3.5   | Compression Set, Method B, after 22 hours ± 0.5 at 70°C ± 2 (158°F ± 4), maximum                                                                                                     | 25%                                                       | ASTM D 395       |
| 3.3.6   | Tear Strength, minimum                                                                                                                                                               | 4000 pounds force per inch (70.0 kN/m)                    | ASTM D 624 Die C |
| 3.3.7   | Bond Strength to Metal, Shear Test, minimum                                                                                                                                          | 1000 psi (6.89 MPa)                                       | ASTM D 1002      |
| 3.3.7.1 | The use of a primer is optional. Tests shall be run on grit blasted aluminum specimens with the nominal 1/2 inch (12.7 mm) overlap. Grit size shall be 100 - 200 mesh (150 - 75 µm). |                                                           |                  |
| 3.3.8   | Specific Gravity                                                                                                                                                                     | 1.00 to 1.20                                              | ASTM D 792       |
| 3.3.9   | Electrical Insulation Resistance, minimum                                                                                                                                            |                                                           | ASTM D 257       |
|         | at 25°C (77°F)                                                                                                                                                                       | 100,000 megohms                                           |                  |
|         | at 120°C (248°F)                                                                                                                                                                     | 750 megohms                                               |                  |
| 3.3.10  | Hydrolytic Stability at 70°C ± 2 (158°F ± 4) and 95% ± 5 RH                                                                                                                          | 20% decrease, in 120 days, of Durometer hardness, maximum | MIL-M-24041      |

### 4. QUALITY ASSURANCE PROVISIONS:

See AMS 3571.