



AEROSPACE MATERIAL SPECIFICATION	AMS3217™/3	REV. D
	Issued 1983-07 Reaffirmed 2003-11 Revised 2021-10	
Superseding AMS3217/3C		
Test Slabs, Chloroprene (CR) 70 - 80		

RATIONALE

Five-Year Review. This standard has been revised to clarify Table 2 and to comply with the current AMS3XXX series template, where applicable.

1. SCOPE

1.1 Form

This specification covers a standard chloroprene (CR) rubber stock in the form of molded test slabs.

1.2 Application

Refer to AMS3217.

2. APPLICABLE DOCUMENTS

Refer to AMS3217.

3. TECHNICAL REQUIREMENTS

3.1 Basic Specifications

The complete requirements for test slabs described herein and their procurement shall consist of this document and the latest issue of the basic specification AMS3217.

3.2 Material

Shall be a chloroprene (CR) compounded to the formulation shown in Table 1.

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:

For more information on this standard, visit
<https://www.sae.org/standards/content/AMS3217/3D>

Table 1 - Formulation

Ingredients	NIST SRM	
	Number	Parts
Neoprene WRT®	--	100.0 (see 3.2.1)
Maglite D® or Equivalent ¹	--	2.0 (see 3.2.2)
Stearic Acid	372	0.5 (see 3.2.2)
Agerite Stalite S® or Equivalent ¹	--	2.0 (see 3.2.2)
Zinc Oxide	370	5.0 (see 3.2.2)
Sid Richardson N550 Carbon Black or Equivalent ¹ ASTM D1765, N550 Classification	--	50.0 (see 3.2.1)
Thiate-U® or Equivalent ¹	--	0.7 (see 3.2.2)
Press Cure: 20 minutes ± 0.5 minute at 311 °F ± 5 °F (155 °C ± 3 °C)		

¹ Equivalent ingredients must be approved by SAE Committee CE.

3.2.1 Weigh parts to the nearest 0.1 gram (see Table 1).

3.2.2 Weigh parts to the nearest 0.02 gram (see Table 1).

3.3 Processing

After the elastomer has banded on the rubber mill, the other ingredients shall be added in the order listed in Table 1.

3.3.1 The stock shall not be allowed to become hotter than can be handled with the bare hands; it is recommended that the stock be removed from the mill and cooled to room temperature before incorporating the final ingredient.

3.3.2 After all ingredients have been incorporated and the stock has been thoroughly milled, the stock shall be passed ten times through a tight mill.

3.3.3 Suitable preforms shall be cut from the freshly milled stock and molded into test slabs as specified in ASTM D3182, Figure 1.

3.4 Properties

Shall be as shown in Table 2.

Table 2 - Properties

Paragraph	Property	Test Sample	Requirement	Test Method
3.4.1	Hardness, Durometer "A"	BUTTON or plied platen	75 ± 5	ASTM D2240
3.4.2	Tensile Strength, Minimum	ASTM Platen	2750 psi (19.0 MPa)	ASTM D412, Die C
3.4.3	Elongation, Minimum	ASTM Platen	200%	ASTM D412, Die C
3.4.4	Specific Gravity	ASTM Platen	1.42 ± 0.02	ASTM D297 Hydrostatic Method
3.4.5	Fluid Resistance			IRM 901 ASTM D471 248 °F ± 5 °F (120 °C ± 3 °C)
3.4.5.1	Volume Change	ASTM Platen	+5 to +15%	70 hours ± 0.5 hour

4. QUALITY ASSURANCE PROVISIONS

Refer to AMS3217.

5. PREPARATION FOR DELIVERY

Refer to AMS3217.