



SURFACE VEHICLE RECOMMENDED PRACTICE

J1352™

JAN2019

Issued 1981-05
Revised 2019-01

Superseding J1352 OCT2013

Compression and Recovery of Insulation Paddings

RATIONALE

Temperature tolerances in Section 4, 8.4, 9.3, and 10.3 have been updated to ± 2 °C.

1. SCOPE

This test method is applicable for determining the relative compression and recovery of fibrous insulation padding materials.

1.1 Purpose

The purpose of this test method is to establish a means of measuring the ability of fibrous insulation materials to resist compression and recover after being compressed, dry or wet. It should be noted that there are several test methods. These methods have been found necessary for different loading applications, variation in surface density of the padding materials, and the requirements of different vehicle manufacturers. The results of these test methods cannot be correlated directly to each other. The material specification should indicate which test is necessary for a particular application.

2. REFERENCES

There are no referenced publications specified herein.

3. APPARATUS

3.1 Platen

Uniformly thick, flat, rigid plate.

3.1.1 Method A

100 x 100 mm platen with a mass of 300 g.

3.1.2 Methods B, C, D, E, and F

100 x 100 mm platen with a mass of 100 g.

3.1.3 To facilitate ease of thickness, measurements the platen may be as much as 10 mm wider in each direction (i.e., maximum 110 x 110 mm). However, care shall be taken to ensure that platen mass remains at either 100 g or 300 g, depending on the method used.

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

Copyright © 2019 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 J1352_201901

SAE values your input. To provide feedback on this Technical Report, please visit http://standards.sae.org/J1352_201901

Documents
Document Sharing Hub

3.2 Compression Machine (Optional)

Capable of compressing the specimen at a rate of 50 mm/min without impact.

3.3 Load Mass

Mass applied to the platen ranging from 2.25 to 35 kg, depending on the method used.

3.4 Thickness Measurement

Scale, calipers, or other devices capable of measurement of sample thickness while constrained by platen with an accuracy of ± 0.5 mm. Thickness may be measured at the center point of the platen, or, alternatively, by measuring the thickness at the center of each of the four sides of the sample and averaging these values.

3.4.1 Definition of Thickness Values

As referenced in this document, thickness values of test specimens are defined as follows:

T_1 = Initial thickness with platen, depending on platen weight used

T_2 = Thickness under application of compression load

T_3 = Thickness after removal of compression load, with platen

3.5 Test Specimen

From the material to be tested, cut enough specimens 100 x 100 mm to achieve a minimum thickness of 25 mm when plied together. This thickness should be as uniform as possible over the entire surface of the specimen. Total thickness should not exceed 50 mm. See Figure 1 for a sketch of the compression setup.

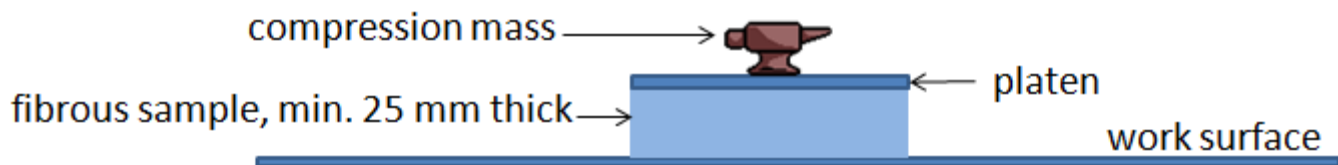


Figure 1 - Sketch of fibrous insulation material with platen and weight applied

4. CONDITIONING

Except as indicated for specific tests below, tests for material classification and for arbitration purposes shall be made on material conditioned in a controlled atmosphere of $21\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ and $50\% \pm 5\%$ relative humidity. Test specimens should be fully exposed to this controlled atmosphere for a minimum of 12 hours prior to testing. Tests should be conducted on conditioned samples unless otherwise specified; for example, for informal audits.

5. PROCEDURE - METHOD A, NORMAL WITH 35 KG LOAD

5.1 Ply sufficient layers of the specimen together to achieve a minimum thickness of 25 mm.

5.2 Add the 300 g platen.

5.3 Apply a load of 2.25 kg on top of the platen for 1 minute. If a dead weight is used, add it slowly without impact. If a compression machine is used, apply the load at a rate of 50 mm/min. Remove the load, then immediately measure the thickness and record as T_1 .