



SURFACE VEHICLE RECOMMENDED PRACTICE	J1351	JUL2015
	Issued	1981-07
	Revised	2015-07
Superseding J1351 JUN1993		
(R) Hot Odor Test for Insulation Materials		

RATIONALE

Procedure added references to SAE J1756 and ISO DIA A 16000-30. Recommendations on washing and panelist qualifications added. Testing and conditioning – Mandated for testing and RH changed to $\pm 10\%$. Odor scale revised and cross referenced to previous scale.

1. SCOPE

This test applies to various materials used for insulation and other applications.

1.1 Purpose

The purpose of this test is to evaluate and compare the odor characteristics of various trim and insulation materials and composites. Odor is a difficult property to quantify. Therefore, the data from this test are probably most useful when compared to data obtained from samples with known odor characteristics.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE Applications

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.

SAE J 1756 Determination of the Fogging Characteristics of Interior Automotive Materials

2.1.2 ISO Publications

Available from International Organization for Standardization, ISO Central Secretariat, 1, ch. de la Voie-Creuse, CP 56, CH-1211 Geneva 20, Switzerland, Tel: +41 22 749 01 11, www.iso.org.

ISO/DISA 16000-30 (draft) Sensory testing of indoor air

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3. APPARATUS

3.1 Glass Jars (canning type jars with metal lids and rings)

The volume of the jars is approximately 1.0 L or 1.0 qt. The jars must be odorless, both at room temperature and at 65 °C (149 °F). The jars have loose fitting lids and rings which can be easily opened and closed. New lids must be used for each battery of tests. Replace the rings if they become rusted or bent. Metal lids have a rubber seal that seals the lid to the glass jar. Jars are commercially available "canning" type jars.

3.2 Oven

The oven shall be an air-circulating type capable of maintaining a temperature of 65 °C ± 3 °C (149 °F ± 5 °F).

3.3 Odor Panel

To obtain consistent data, an odor panel must be carefully selected. Strong smokers, heavy users of aromatic cosmetics, habitual gum or tobacco users, or people with sinus problems are not suitable to be a panelist. Once selected, the panel shall remain as stable as possible.

It is strongly recommended that the sensory panel follow the requirements of ISO/DIS 16000-30, sensory testing of indoor air Section 8.1. Panelist requirements will be mandatory in future revisions.

3.4 Test Room

Tests shall be conducted in an odor-free environment. Conditioned space is required (23 °C ± 2°C (70 °F ± 2 °F) and 50% RH ± 10% RH).

4. TEST SPECIMENS AND CONDITIONING

Test specimens shall be representative of the material or composite being evaluated. Test specimens shall have a surface area (including all surfaces) of 250 cm² ± 25 cm² (0.28 ft² ± 0.028 ft²). Test specimens can be cut to any dimension compatible to the dimensions of the jar, provided the specimen surface area is maintained at 250 cm² ± 25 cm².

Prior to the test, the specimens shall be conditioned for 24 hours at 23 °C ± 2°C (70 °F ± 2 °F) and 50% RH ± 10% RH.

5. PROCEDURE

5.1 Jars, lids, and rings are to be washed in accordance with the glassware cleaning procedure outlined in SAE J 1756. The use of a laboratory dishwasher equivalent to the dishwasher specified in SAE J 1756 is required.

5.2 Samples are to be tested dry and in the presence of moisture. For the dry test, place a test specimen in a jar and cover with the lid and ring. For the wet test, put 2 cc of distilled or deionized water directly on the specimen after the specimen has been placed in the jar and cover with the lid and ring. Keep the water in a tightly closed container and store it in a cool, dry, ventilated area. Include one empty jar for control use purposes closed with a lid and ring.

5.3 Place the jars in an oven preheated to 65 °C ± 3 °C (149 °F ± 5 °F) for 1 h (±5 min). This temperature was selected to be representative of automotive applications. However, at the discretion of the test engineer, the temperature can be modified to any temperature or set of temperatures. Note any changes to heating time or temperature in the test report.

CAUTION: This test shall not be used to test materials that will release toxic fumes. The test engineer must be aware of the chemical composition and any potential reactions of the materials being tested. All necessary precautions must be taken to avoid inhalation of noxious fumes.