SAE International™

SURFACE VEHICLE RECOMMENDED PRACTICE

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Nonmetallic Trim Materials—Test Method for Determining the Staining Resistance to Hydrogen Sulfide Gas

RATIONALE

Add tolerance to 4.1, 5.3, 5.5, 5.6 and correct typographical error 2.1.2.

1. SCOPE

This SAE Recommended Practice is designed to reveal discoloration which may occur when nonmetallic materials used for trimming automobiles are exposed for a limited time to an atmosphere containing hydrogen sulfide.

NOTE 1: CAUTION—Hydrogen sulfide gas is extremely hazardous. Use of this substance may be fatal if proper precautions are not taken. This test method does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

NOTE 2: A fume hood and adequate ventilation should be provided at all times during testing.

2. REFERENCES

2.1 Related Publications

The following publications are provided for information purposes only and are not a required part of this document.

2.1.1 AATCC Publication

Available from American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709-2215, Tel: 919-549-8141, www.aatcc.org.

AATCC Evaluation Procedure 1 Gray Scale for Color Change

2.1.2 Global Engineering Document

Available from Global Engineering, 15 Inverness Way East, Englewood CO 80112, Email: global@ihs.com.

ISO 105-A02 Textiles—Tests for Colour Fastness—Part A02: Grey Scale for Assessing Change in Colour

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3. MATERIALS AND EQUIPMENT REQUIRED

3.1 Hydrogen sulfide cylinder with valve.

3.2 Two test tubes approximately 38 x 200 mm.

3.3 Two two-hole stoppers to fit the test tubes.

3.4 Miscellaneous glass tubing, cotton, plastic tubing, and pinch clamp as in Figure 1.

4. TEST SPECIMEN

4.1 Cut a 25 ± 2 mm x 50 ± 2 mm test specimen. (The test specimen must be of such a size and shape to allow for free passage of gas on all sides.)

5. PROCEDURE

5.1 Assemble apparatus per Figure 1 and place under fume hood.

5.2 Insert test specimen into tube B.

5.3 Add 50 ± 2 mL of tap water to tube A. Insert cotton packing per Figure 1. Stopper tubes A and B.

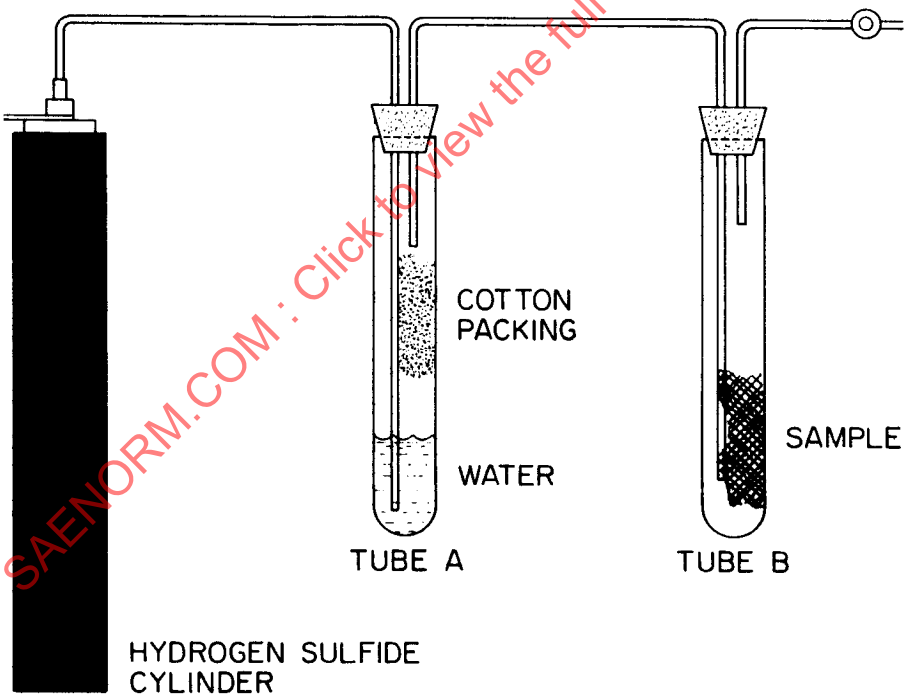

FIGURE 1 - STAINING TEST DIAGRAM

5.4 Remove pinch clamp from exhaust hose of tube B and cautiously open the valve on the hydrogen sulfide cylinder. Adjust the valve so hydrogen sulfide gas bubbles through the system at a uniform and controlled rate, with a steady flow of bubbles at 5 bubbles/second.

5.5 Allow the system to purge for 1.5 min ± 5 sec., then close the valve and immediately replace the pinch clamp on the exhaust hose of tube B.

5.6 Allow the system to remain in the closed position for an additional 2 min ± 5 sec.