



Testing of Staining Behavior of Molded Headlining Through Dust Deposits

1 Introduction

Note: Nothing in this standard supercedes applicable laws and regulations.

Note: In the event of conflict between the English and domestic language, the English language shall take precedence.

1.1 Purpose. This test procedure determines the dirt collection capacity of molded headlining. The test provides a method of determining ability of dust collection and then ability to remove collected dust through vacuum cleaning.

1.2 Applicability. Molded headlining.

1.3 Remarks. Headliner dirt collection and removal characteristics have found to be dependent upon the complete construction of the molded headliner.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

ISO 105-A03

2.2 GM Standards/Specifications.

GMW3221 GMW14122

2.3 Additional References.

- Blower equipment such as WE 3140 TR available at natopart.com/fans-air-circulators-blower-equipment/3367890-4140-22-284-0337.html
- Defined dry dirt available from Bayer Aktiengesellschaft, Kaiser-Wilhelm-Allee 1, 51373 Leverkusen, Germany

3 Resources

3.1 Facilities. Not applicable.

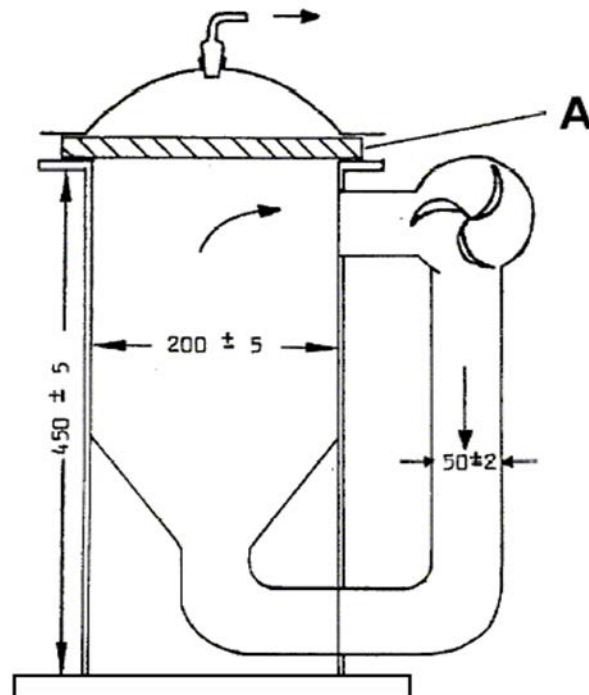
3.1.1 Calibration. The test facilities and equipment shall be in good working order and shall have a valid calibration label.

3.1.2 Alternatives. Alternative test facilities and equipment may also be used. However, all measuring variables as specified in this standard shall be determined correctly with respect to their physical definition.

3.2 Equipment.

3.2.1 Test Chamber. See Figure 1. The test chamber consists of a container equipped with an ability to circulate air (air throughput 1 m³/minute, e.g., blower type: WE 3140 TR (see 2.3), or equivalent). The container has at the upper edge a supporting surface to mount the test piece. This supporting surface shall have at least the size of the test piece. The opening of the container is closed with a lid. The lid has a connection for the vacuum pump. The pressure difference between test piece upper and down side shall be 5 kPa to 10 kPa. For example, if the ambient pressure is 100 kPa, the vacuum pump shall create a pressure between 90 kPa and 95 kPa in the container.

Figure 1: Test Chamber



3.2.2 Vacuum pump.

3.2.3 Vacuum cleaner (600 W).

3.2.4 Dry dirt, preferred is defined dry dirt (Leverkusener dry dirt, see 2.3).

3.2.5 Grey Scale to ISO 105-A03.

3.3 Test Vehicle/Test Piece. Circular test pieces of $210 \text{ mm} \pm 3 \text{ mm}$ diameter are taken from as flat as possible areas of the molded headlining.

For initial sample approval and arbitration, test three specimens. For routine quality control, test one random specimen per year.

3.4 Test Time.

Calendar time: 1 day

Test time: 2 hours

Coordination time: 2 hours

3.5 Test Required Information. Not applicable.

3.6 Personnel/Skills. Engineer with textile background able to operate applicable equipment.

4 Procedure

4.1 Preparation. The test shall be performed on test pieces without pre-treatment in as-delivered condition.

4.2 Conditions.

4.2.1 Environmental Conditions. Unless otherwise specified, the test shall be performed at a temperature specified in GMW3221, Code D.

4.2.2 Test Conditions. Deviations from the requirements of this standard shall have been agreed upon. Such requirements shall be specified on component drawings, test certificates, reports, etc.

4.3 Instructions.

4.3.1 The container is filled with $3 \text{ g} \pm 1 \text{ g}$ dry dirt, see 2.3.