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Materials for Vehicle Interiors

Burning Behavior, Material Requirements

Updated translation: 2018-06

Previous issues

TL 1010: 1971-10, 1972-04, 1972-09, 1974-08, 1975-09, 1985-02, 1993-01

Changes

The following changes have been made as compared to Technical Supply Specification TL 1010: 1997-05:

- Section 3.1 expanded

1 Scope

This Technical Supply Specification defines requirements for the burning behavior of materials/components in the passenger compartment.

It pertains to every part of a single or composite material whose surface contacts the air space of the passenger compartment and that is located within a maximum depth of 13 mm (1/2 inch) from the passenger compartment surface. For parts that are joined over less than the full surface area and that succeed each other during assembly, the depth of 13 mm shall be taken into consideration again after removal of the part closest to the passenger compartment (see Figure 1), until a layer exists that is thicker than 13 mm or an overall depth of 26 mm (1 inch) has been reached.

2 Definitions

Materials/components of the passenger compartment: seat cushions, backrests, seat belts, roof liners, folding tops of convertibles, arm rests, all trims, shelves, headrests, floor coverings, sun visors, curtains, blinds, seat coverings and all other materials used in the passenger compartment, including padding and elements that deploy in the event of a crash whose intended purpose is to absorb energy during a crash.

Check standard for current issue prior to usage.

The English translation is believed to be accurate. In case of discrepancies the German version shall govern.
Numerical notation acc. to ISO practice.

This electronically generated standard is authentic and valid without signature.

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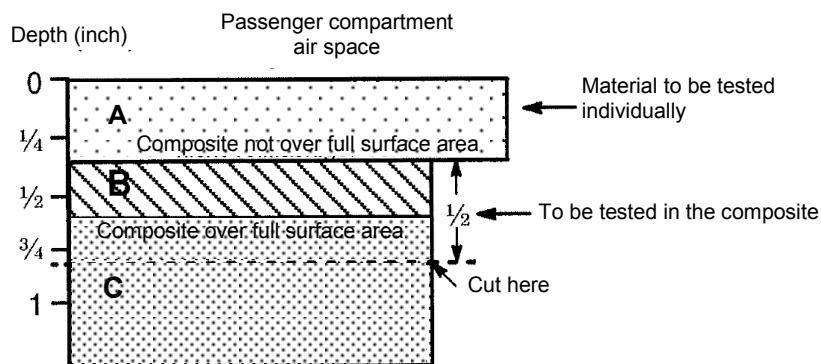
Composite materials: Parts that are made up of multiple layers of the same material or different materials that are bonded together at all points of contact, i.e., over the full surface area (see Figure 1).

Abbreviations:

BR: Burning Rate

NBR: No Burning Rate

SE: Self-Extinguishing



(A = single material, B and C = composite material)

Figure 1

3 Requirements

3.1 Basic specifications

Approval of first supply and changes according to Volkswagen standard VW 01155.

Avoidance of hazardous substances according to VW 91101.

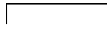
Materials/components in the passenger compartment shall comply fully with the requirements specified in national regulations if the materials/components are intended for export to countries in which compliance with these requirements is stipulated by law. This applies in particular to 571.302 (USA.), CMVSS 302 (Canada), GB 8410 (China) and TRIAS 48-1993 (Japan).

Note regarding GB 8410 (China): The motor cover and wheel cowl components mentioned in the regulation only have to be tested if they are located within the passenger compartment.

3.2 Validity of requirements

The minimum requirements described below shall be fulfilled by all materials/components in the passenger compartment (see Section 2). If even a single value of a random sample is out of compliance with the requirement, this is sufficient grounds to reject the entire delivery.

3.3 Mandatory documentation

Sections of Table 1 marked with a documentation bar () are subject to mandatory documentation if the TL number in the drawing is also marked with a bar or if a corresponding TLD (Technical Guideline for Documentation) number appears in the drawing. The documents shall be kept on file for 10 years.

3.4 Burning behavior

See Table 1. The tests are performed on unaged material and material that has been aged according to Test Specification PV 3904. The test results determined on aged material are not subject to mandatory documentation. Test results on parts with a sample length of < 100 mm are also not subject to mandatory documentation. For such parts, an agreement can be reached to perform testing on sheet material whose thickness corresponds to the minimum wall thickness or thickness of the finished parts.

Table 1

Number	Burning behavior	Burning rate BR (mm/min)	Specification in test report
1	Burning over the entire measurement section BR	< 100	BR ... mm/min
2	Self-extinguishing specimens		
2.1	Flame travel > 50 mm BR	< 100	SE/BR ... mm/min
2.2	Flame travel ≤ 50 mm, burning time < 60 s	-	SE/NBR

4 Notes on testing

4.1 Testing of burning behavior

Test equipment and method according to U.S. Regulation 571.302 and according to DIN 75200.

Specimens shall be taken from the material direction with the highest burning rate. The material surface that is located closest to the air space of the passenger compartment shall face downward.

Wires are permitted for specimens < 51 mm in width. For specimens ≥ 51 mm the use of wires is only permitted when the specimen, deflect, roll up and exhibit irregular burning due to the fact that the burn-off is no longer horizontal.

The following applies to parts with a specimen length < 100 mm: distance between support wires 10 mm, first wire is 10 mm from the open end of the holder.

5 Referenced documents

The following documents cited in this standard are necessary for application.

In this Section, terminological inconsistencies may occur as the original titles are used.

- VW 01155 Vehicle Supply Parts; Approval of First Supply and Changes
- VW 91101 Environmental Standard for Vehicles; Vehicle Parts, Materials, Operating Fluids; Avoidance of Hazardous Substances
- DIN 75200 Determination of Burning Behavior of Interior Materials in Motor Vehicles