

Method for

Determination of burning behaviour of interior materials for road vehicles, and tractors and machinery for agriculture and forestry

Committees responsible for this British Standard

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- Association of Trailer Manufacturers
- Caravan Club
- Department of Transport
- Metropolitan Police
- Motor Industry Research Association
- National Caravan Council Limited
- Society of Motor Manufacturers and Traders Limited

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National foreword

This British Standard has been prepared under the direction of the Automobile Standards Policy Committee and is identical with ISO 3795:1989 “*Road vehicles, and tractors and machinery for agriculture and forestry — Determination of burning behaviour of interior materials*”, published by the international Organization for Standardization (ISO).

This revision of this standard supersedes BS AU 169:1978 which is withdrawn. The revision comprises extension of the title and scope to cover tractors and machinery for agriculture and forestry. The technical content of the standard remains unaltered.

Cross-reference. The Technical Committee has reviewed the provisions of ISO 2768-1:1989, to which normative reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This International Standard specifies a method for determining the horizontal burning rate of materials used in the occupant compartment of road vehicles (for example, passenger cars, lorries/trucks, estate cars, coaches), and of tractors and machinery for agriculture and forestry, after exposure to a small flame.

This method permits testing of materials and parts of the vehicle interior equipment individually or in combination up to a thickness of 13 mm. It is used to judge the uniformity of production lots of such materials with respect to their burning behaviour.

Because of the many differences between the real world situation (application and orientation within vehicle interior, conditions of use, ignition source, etc.) and the precise test conditions specified in this International Standard, this method cannot be considered as suitable for evaluation of all true in-vehicle burning characteristics.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2768-1:1989, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1

burning rate

quotient of the burnt distance measured according to this International Standard and the time taken to burn this distance

it is expressed in millimetres per minute

3.2

composite material

material composed of several layers of similar or different materials intimately held together at their surfaces by cementing, bonding, cladding, welding, etc.

when different materials are connected together intermittently (for example, by sewing, high-frequency welding, riveting), then in order to permit the preparation of individual samples in accordance with clause 6, such materials will not be considered as composite materials

3.3

exposed side

side which faces towards the occupant compartment when the material is mounted in the vehicle

4 Principle

A sample is held horizontally in a U-shaped holder and is exposed to the action of a defined low-energy flame for 15 s in a combustion chamber, the flame acting on the free end of the sample. The test determines if and when the flame extinguishes or the time in which the flame passes a measured distance.

5 Apparatus

5.1 Combustion chamber (see Figure 1), preferably of stainless steel and having the dimensions given in Figure 2. The front of the chamber contains a flame-resistant observation window, which may cover the front and which can be constructed as an access panel.

The bottom of the chamber has vent holes, and the top has a vent slot all around. The combustion chamber is placed on four feet, 10 mm high.

The chamber may have a hole at one end for the introduction of the sample holder containing the sample; in the opposite end, a hole is provided for the gas line. Melted material is caught in a pan (see Figure 3) which is placed on the bottom of the chamber between vent holes without covering any vent hole area.

5.2 Sample holder, consisting of two U-shaped metal plates or frames of corrosion-proof material. Dimensions are given in Figure 4.

The lower plate is equipped with pins, the upper one with corresponding holes in order to ensure consistent holding of the sample. The pins also serve as the measuring points at the beginning and end of the burning distance.

A support shall be provided in the form of 0,25 mm diameter heat-resistant wires spanning the frame at 25 mm intervals over the bottom U-shaped frame (see Figure 5).