

Fire behaviour of building materials and elements

Part 1: Classification of building materials
Requirements and testing**DIN**
4102-1

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Begriffe, Anforderungen und Prüfungen*In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.***Contents**

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Translation by DIN-Sprachendienst.

In case of doubt, the German-language original should be consulted as the authoritative text.

Foreword

This standard has been prepared by Technical Committee *Brandverhalten von Baustoffen* of the *Normenausschuß Bauwesen* (Building and Civil Engineering Standards Committee).

Amendments

The following amendments have been made to the May 1981 edition.

- a) Additional requirements are specified for material classes A2 and B1.
- b) Smoke generation tests and toxicity tests are now included.
- c) The fire test using the 'Brandschacht' apparatus is no longer included as it is now specified in DIN 4102-16.

Previous editions

DIN 4102-1: 1977-09, 1981-05.

Dimensions in mm

1 Scope

1.1 This standard defines fire behaviour classes for building materials and specifies requirements and test methods for each class. It applies to sheet materials (including plates and slabs), composite materials, material assemblies, coverings, insulation, coatings, pipes and fittings, decorative materials, curtains and other materials suspended from ceilings, fire retardants, and intumescent coatings, whether or not these materials are designated as construction products ('*Bauprodukte*') in the German *Länder* building regulations (cf. Explanatory notes).

1.2 The classification specified in this standard serves to assess the fire behaviour of materials alone or in combination. Fire behaviour not only depends on the nature of the material, but also on its shape, surface characteristics, density, processing, and its combination with other materials, including any bonding agents or fasteners used. These factors are to be taken into account when preparing tests, selecting specimens, evaluating test results and marking the materials.

2 Normative references

This standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate place in the text and the titles of the publications are listed below. For dated references, subsequent amendments to or revisions of any of these publications apply to this standard only when incorporated into it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

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|-------------|--|
| DIN 4102-2 | Fire behaviour of building materials and elements – Building components – Concepts, requirements and tests |
| DIN 4102-4 | Fire behaviour of building materials and elements – Overview and design of classified building materials, elements and components |
| DIN 4102-8 | Fire behaviour of building materials and elements – Small-scale test furnace |
| DIN 4102-14 | Fire behaviour of building materials and elements – Determination of the burning behaviour of floor covering systems using a radiant heat source |
| DIN 4102-15 | Fire behaviour of building materials and elements – 'Brandschacht' apparatus |
| DIN 4102-16 | Fire behaviour of building materials and elements – 'Brandschacht' tests |
| DIN 18180 | Gypsum plasterboard – Types, requirements and testing |
| DIN 50014 | Artificial climates in technical applications – Standard atmospheres |
| DIN 50050-1 | Small cabinets for testing the burning behaviour of materials |
| DIN 50051 | Burners for testing the burning behaviour of materials |
| DIN 50055 | Light measuring system for testing smoke development |
| DIN 51622 | Propane, propene, butane, butene and their mixtures – Requirements |
| DIN 51900-2 | Determination of gross calorific value of solid and liquid fuels using the bomb calorimeter, and calculation of calorific value – Method using the isothermal jacket |
| DIN 51900-3 | Determination of gross calorific value of solid and liquid fuels using the bomb calorimeter, and calculation of calorific value – Method using the adiabatic jacket |
| DIN 53436-1 | Toxicity testing of fire effluents – Combustion apparatus and determination of test temperature |
| DIN 53436-2 | Toxicity testing of fire effluents – Thermal decomposition method |