

## Standarder for materialeprøvning af/ Standards for reaction to fire testing of

### Bygningsmaterialer/ Building materials

BS 476 - part 4	Fire Tests on building materials and structures. Part 4. Non-combustibility test for materials.
BS 476 - part 13	Fire Tests on building materials and structures. Part 13. Method of measuring the ignitability of products subjected to a thermal irradiance.
Dantest Metode 100.02/01	Isoleringsmaterialer – Temperaturstabilitet.
DIN 4102 – Teil 1 - B2	Fire behaviour of building materials and building components. "Brennbare" Building materials of class B – 6.2 Building materials of class B2.
DIN 4102 – Teil 14	Brandverhalten von Baustoffen und Bauteilen. Bodenläge und Bodenbeschichtungen. Bestimmung der Flammenausbreitung bei Beanspruchung mit einem Wärmestrahler.
DIN 53438 - 1	Prüfung von brennbaren Werkstoffen. Verhalten beim beflammen mit einem Brenner. Allgemeine Angaben.
DIN 53438 - 2	Prüfung von brennbaren Werkstoffen. Verhalten beim beflammen mit einem Brenner. Kantenbeflammung.
DIN 53438 - 3	Prüfung von brennbaren Werkstoffen. Verhalten beim beflammen mit einem Brenner. Flächenbeflammung.
DIN 54332	Determination of burningbehaviour of textile floor coverings.
DS/INSTA 410	Brand prøvning – Bygge materialer - Antændelighed
DS/INSTA 412	Brand prøvning – Bygge materialer – Varmeafgivelse og røgudvikling.
DS/INSTA 413	Brand prøvning – Tagdækninger – Brandspredning.
DS/INSTA 414	Brand prøvning – Gulvbelægnings – Brandspredning og røgudvikling.
EN 13823	Reaction to fire tests for building products – Building products excluding floorings exposed to the thermal attack by a single burning item.
EN ISO 1182	Reaction to fire tests for building products – Non-combustibility test (ISO 1182:2002)
EN ISO 11925 - 2	Reaction to fire tests – Ignitability of building products subjected to a direct impingement of flame – Part 2: Single-flame source test (ISO 11925:2002).
EN ISO 1716	Reaction to fire tests for building products – Determination of the heat of combustion (ISO 1716:2002).
EN ISO 9239 – 1	Reaction to fire tests for floorings – Part 1: Determination of the burning behaviour using a radiant heat source (ISO 9239-1:2002).
ENV 1187 test 2	Test methods for external fire exposure to roofs. Test 2: Method with burning brands and wind.
ISO 1182	Fire tests – Building materials – Non-combustibility test.
ISO 1716	Building materials – Determination of calorific potential.
ISO 4589 - 2	Plastics – Determination of burning behaviour by oxygen index – Part 2: ambient-temperature test.

ISO 5657	Reaction to fire tests – Ignitability of building products using a radiant heat source.
ISO 5658-2	Reaction to fire tests – spread of flame – Part 2: Lateral spread on building products in vertical configuration.
ISO 5659 - 2	Plastics – Smoke generation – Part2: Determination of optical density by a single-chamber test.
ISO 5660 – 1	Reaction-to-fire-tests – Heat release, smoke production and mass loss rate – Part 1: Heat release rate (cone calorimeter method).
ISO 5660 – 2	Reaction-to-fire-tests – Heat release, smoke production and mass loss rate – Part 2: Smoke production rate (dynamic measurement).
ISO 6925	
ISO 9239 – 1	Reaction to fire tests- Horizontal surface spread of flame on floor-covering systems – Part 1: Flame spread using a radiant heat ignition source
ISO 9239 – 1	Reaction for fire tests for floorings – Part 2: determination of flame spread at a heat flux level of 25 kW/m <sup>2</sup> .
ISO 9705	Fire tests – Full-scale room test for surface products.
NT FIRE 002	Building products: Ignitability.
NT FIRE 004	Building products: Heat Release and smoke generation.
NT FIRE 006	Roofings: Fire spread.
NT FIRE 007	Floorings: Fire spread and smoke generation.
NT FIRE 030	Building products: Fire spread and smoke production – Full scale test.
NT FIRE 036	Pipe insulation: Fire spread and smoke production – Full scale test.
NT FIRE 038	Building materials: Combustible content.

Diverse/ various

ASTM D2863-97	Standard test method for measuring the minimum oxygen concentration to support candle-like combustion of plastics (Oxygen Index).
ASTM D3278-96	Standard test method for Flash Point of liquids by small scale closed-cup apparatus.
BS 4066 - part 1	Tests on electric cables under fire conditions. Part 1. Method of test on a single vertical insulated wire or cable.
DIN 53436 Teil 1 & 2	Erzeugung thermischer Zersetzungsprodukte von Werkstoffen unter Luftzufuhr und ihre toxikologische Prüfung. Teil 1 & 2.
DS 973.2	Beskyttelseshjelme til industri m.v. Prøvningsmetoder.
DS 2322.4	Øjenværn – Mekaniske prøvningsmetoder m.m.
DS/EN 71.2	Legetøj Sikkerhedskrav. Del 2: Brændbarhed.
EN 393	Lifejackets and personal buoyancy aids – Buoyancy aids – 50N
EN 394	Lifejackets and personal buoyancy aids – Additioanl items.
EN 395	Lifejackets and personal buoyancy aids – Lifejackets – 100N
EN 396	Lifejackets and personal buoyancy aids – Lifejackets – 150N
IEC 332 - 1	Tests on electric cables under fire conditions. Part 1 : Test on a single vertical insulated wire or cable.

ISO 3582	Cellular plastics and cellular rubber materials – Laboratory assessment of horizontal burning characteristics of small specimens subjected to a small flame.
ISO 3679	Paints, varnishes, petroleum and related products – Determination of flashpoint – Rapid equilibrium method.
ISO 3680	Paints, varnishes, petroleum and related products – Flash/no flash test – Rapid equilibrium method.
ISO 4589 – 2	Plastics – Determination of burning behaviour by oxygen index – Part 2: ambient-temperature test.
ISO 5659 - 2	Plastics – Smoke generation – Part 2: Determination of optical density by a single-chamber test.
ISO 9772	Plastics – Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source
NFPA 270	Measurement of Smoke Obscuration Using a Conical Radiant Source in a Single Closed Chamber.
UL 94	Test for flammability of plastic materials for parts in devices and appliances.

### Tog/ Trains

UIC 564 – 2, appendix 4	Test method for determining the fire-resistance of rigid non-thermoplastic materials.
UIC 564 – 2, appendix 5	Test method for determining the fire-resistance of coated and uncoated textiles.
UIC 564 – 2, appendix 6	Test method for determining the fire-resistance of rubber door and window seals.
UIC 564 – 2, appendix 7	Test method for determining the fire-resistance of materials by measuring the oxygen number.
UIC 564 – 2, appendix 8	Test method for determining the fire-resistance of foam materials..
UIC 564 – 2, appendix 9	Test method for determining the fire-resistance of electric cables.
UIC 564 – 2, appendix 10A & B	Test method for determining the fire-resistance of interconnecting gangway rubber flanges..
UIC 564 – 2, appendix 11	Test method for determining the fire-resistance of rigid thermoplastic materials.
UIC 564 – 2, appendix 12	Test method for determining the fire-resistance of floor coverings.
UIC 564 – 2, appendix 13	Test method for determining the fire-resistance of seats.
DIN 5510 – 2, klasse S1	Vorbeugender Brandschutz in Schienenfahrzeugen. Teil 2: Brennverhalten und Brandnebenscheinungen von werkstoffen und Bauteilen. 4.2.2. Brennbarkeitsklasse S1.
DIN 5510 – 2, klasse SF1 til SF3	Vorbeugender Brandschutz in Schienenfahrzeugen. Teil 2: Brennverhalten und Brandnebenscheinungen von werkstoffen und Bauteilen. 4.2.4. Brennbarkeitsklasse SF1 bis SF3 für Bodenbeläge.
DIN 5510 – 2, Sæder/ seats	Vorbeugender Brandschutz in Schienenfahrzeugen. Teil 2: Brennverhalten und Brandnebenscheinungen von werkstoffen und Bauteilen. 4.2.5. Sitze.

DIN 53438 –1	Se byggematerialer/ See building materials
DIN 53438 – 2	Se byggematerialer/ See building materials
DIN 53438 – 3	Se byggematerialer/ See building materials

### Fly/ Aeroplanes

JAR	Joint Aviation Requirements. JAR-25 Large Aeroplanes
FAR	Federal Aviation regulations. Part 25 Airworthiness Standards: Transport Category Airplanes.

### Køretøjer/Vehicles

ISO 3795	Road vehicles, and tractors and machinery for agriculture and forestry – Determination of burning behaviour of interior materials.
FMVSS 302	Flammability of interior materials. Passenger cars, Multipurpose passenger vehicles, trucks and buses.

### Skibe/ Ships

#### IMO FTP Code (Res.MSC.61(67)):

- FTPC Part 1 Non combustibility test .  
(IMO Res. A.799 (19) Revised Recommendation on test methods for qualifying marine construction materials as non-combustible).  
Test method: ISO 1182.
- FTPC Part 2 Smoke and Toxicity Test.  
Test method: ISO 5659- 2.  
Toxicity: Direct MS.
- FTPC Part 5 Test for surface flammability.  
Test procedure: IMO Res.A.653 (16) – Recommendation on improved fire test procedures for surface flammability of bulkhead, ceiling and deck finish materials.  
Additional requirements: ISO 1716:1973, FTPC part 2.
- FTPC Part 6 Test for primary deck coverings.  
Test procedures: IMO Res. A. 687(17) Fire test procedures for ignitability of primary deck coverings. Test method: IMO Res. A. 653 (16). Additional requirements: FTPC Part 2.
- FTPC Part 7 Test for vertically supported textiles and films.  
Test procedure: IMO Res. A.471 (XII) Recommendation on test method for determining the resistance to flame of vertically supported textiles and films as amended by IMO Res. A. 563 (14).
- FTPC Part 8 Test for upholstered furniture.  
Test method: IMO Res. A. 652(16) Recommendation on fire test procedures for upholstered furniture.

FTPC Part 9 Test for bedding components.  
 Test method: IMO Res.A.688 (17) Fire test procedures for ignitability of bedding components.

FTPC Part 10 Test for fire-restricting materials for high-speed craft.  
 Test methods: ISO 9705 and ISO 5660

USCG 46 CFR subpart 164.009 – Non-combustible Materials for Merchant Vessels.

### Tekstiler & Møbler/ Textiles & Furniture

BS 5852	Methods of test for Assessment of the ignitability of upholstered seating by smouldering and flaming sources.
BS 6807:1996	British Standard Methods of test for Assessment of the ignitability of mattresses, divans and bed bases with primary and secondary sources of ignition.
BS 7175	British Standard Methods of test for The ignitability of bedcovers and pillows by smouldering and flaming ignition sources.
BS 7176:1995	Specification for Resistance of upholstered furniture for non-domestic seating by testing composites.
BS 7177	Specification for Resistance to ignition of mattresses, divans and bed bases.
DIN 5510-2	Vorbeugender Brandschutz in Schienenfahrzeugen. Teil 2: Brennverhalten und Brandnebenerscheinungen von werkstoffen und Bauteilen. 4.2.5. Sitze.
DS/EN 1021-1	Møbler. Bestemmelse af antændelighed af polstrede møbler. Del 1: Antændelseskilde svarende til cigaret.
DS/EN 1021-2	Møbler. Bestemmelse af antændelighed af polstrede møbler. Del 1: Antændelseskilde svarende til tændstikflamme.
DS/EN 597-1	Furniture – Assessment of the ignitability of mattresses and upholstered bed bases – Part 1: ignition source: Smouldering cigarette.
DS/EN 597-2	Furniture – Assessment of the ignitability of mattresses and upholstered bed bases – Part 2: ignition source: match flame equivalent.
ISO 7176-16	Wheelchairs – Part 16: Resistance to ignition of upholstered parts – Requirements and test methods.
ISO 8191-1	Furniture – Assessment of the ignitability of upholstered furniture – Part 1: Ignition source: smouldering cigarette.
ISO 8191-2	Furniture – Assessment of the ignitability of upholstered furniture – Part 1: Ignition source: match-flame equivalent.
NT FIRE 014	Methods of test of assessment of the ignitability of upholstered seating by smouldering and flaming ignition.
NT FIRE 015	Recommendation on the test method for determining the resistance to flame of vertically supported textiles and films.
NT FIRE 019	Multi-layer textiles: Burning behaviour – Tablet test.
NT FIRE 032	Upholstered furniture: Burning behaviour – Full scale test.
NT FIRE 037	Bedding components: Ignitability.
SIS 650082	Textilvaror. Bestämning av brandhårdighet hos vävnader.