Standards in Germany, Europe and the World
Attempt at an explanation

"DIN", "ISO", "EN" or "DIN EN ISO" or "DIN ISO" or "DIN EN"?
And what do the abbreviations "OENORM", "SN EN", "UNI", "BS", "NF" or "GB" actually mean?

A little insight into the world of standards

- **DIN** – The **DIN-standard** is a voluntary standard in which tangible and intangible objects are unified. DIN standards are created at the suggestion and through the initiative of interested parties (usually from German industry) and with the agreement of all those involved. Before a standard is created, there must be an interest on the part of several stakeholders to agree on one or more standards.
  Even as a private person, one can submit an informal letter to DIN to request a standard. Under the direction of a working committee at **DIN = Deutsches Institut für Normung (German Institute for Standardisation)**, these are afterwards drafted.

- **ISO standards or the European EN standards** are standards developed at international level. They are gradually replacing the national DIN standards.
  DIN standards continue to exist only for those products that do not have ISO or EN standards.

- **EN - All European Standards (EN)** are rules that have been developed through a public standardisation process.

They have been ratified by one of the three European committees for standardisation (European Committee for Standardisation CEN, European Committee for Electrotechnical Standardisation CENELEC and European Telecommunications Standards Institute ETSI).
EN intend the harmonisation of technical rules and laws in the European single market. After ratification, a European standard must be adopted unchanged as a national standard by the national standards organisations. Conflicting national standards must be withdrawn to avoid double standardisation.

- ISO: The International Organization for Standardization develops international standards in all areas with two **exceptions**:

  - electrics and electronics, for which the **International Electrotechnical Commission (IEC)** is responsible.
  - telecommunications, for which the **International Telecommunication Union (ITU)** is responsible.

  Compared to DIN or EN standards, an ISO standard is used for worldwide standardisation. In the meantime, more than 160 countries are represented in the ISO, and a standard is created, similar to Germany, when there is both an interest and a good justification. Instead of being related to only one country, an ISO standard applies to every member country.

There is a fluid transition of standards between countries: for example, an ISO standard can be transferred directly into EN, and then submitted to DIN as a proposal for a German standard, which can result in parallels in the standards.

Designations explained with examples:

- **DIN:** (e.g. DIN A4) is a DIN standard that has predominantly national significance.
- **DIN EN:** (e.g. DIN EN 13501) is the German adoption of a European Standard. European Standards, if adopted, must be adopted unchanged by the members of CEN and CENELEC.
- **DIN EN ISO:** (e.g. DIN EN ISO 9921) is the German adoption of a standard developed under the auspices of ISO or CEN and then published by both organisations.
- **DIN ISO:** (for example DIN ISO 10002) is an unchanged German adoption of an ISO standard.

Furthermore, additional information is often entered in the designation to refer to a special part of a standard. A part of a standard is noted with a hyphen (Part 3 of DIN EN 3 as DIN EN 3-3). The date of issue of the version is noted after a colon, as for example in DIN 1301-1:2002-10, which designates the first part of the standard DIN 1301 and was published in October 2002.

Special cases explained:

- **DIN IEC:**
  For example DIN IEC 60912 - Unchanged German adoption of an IEC standard.

- **DIN CEN/TS or DIN CLC/TS:**
  E.g. DIN CLC/TS 50459-1 - Unchanged German adoption of a European Technical Specification.

- **DIN CWA:**
  E.g. DIN CWA 14248 - Unchanged German adoption of a CEN or CENELEC Workshop Agreement (Technical Rule).

- **DIN VDE:**
  Topics in electrical engineering, electronics and information technology are dealt with jointly by DIN and VDE through the DKE. See list of DIN VDE standards.

- **DIN SPEC:**
  Development of specifications: no involvement of all interested parties and therefore much faster than standardisation.

Here are some national regulations that also affect our products on the website, or that might be of interest to our customers:

SWITZERLAND

The Swiss Association for Standardisation SNV is a future-oriented information service provider. It acts for the benefit of the Swiss economy and society and represents their interests.

The Swiss Association for Standardisation (SNV) is the direct representative of global standardisation (via ISO) and European standardisation (via CEN) in Switzerland and is a hub in numerous other national and international standards networks. Examples:

Thus, the SNV assumes an important bridging function between the standardisation experts and the users of standards. http://www.snv.ch/

Examples:

- **SN EN 13501-1+A1; SIA 183.051+A1:2009** SNV Standard, 2009: Fire classification of construction products and types of construction **Fire behavior Part 1:** Classification using results of reaction to fire tests of construction products

- **SN EN 13501-2; SIA 183.052:2016** SNV Standard, 2016: Fire classification of construction products and types of construction **Fire behavior Part 2**: Classification using results of fire resistance tests, except for ventilation systems.

- **SN EN 13501-3+A1; SIA 183.053+A1:2009** SNV Standard, 2009: Fire classification of construction products and types of construction **Fire behavior Part 3:** Classification using the results of fire resistance tests on building services components: fire-resistant ducts and fire dampers.

- **SN EN 13501-4; SIA 183.054:2016** SNV Standard, 2016: Fire performance classification of construction products and types of construction **Part 4**: Classification using the results of fire resistance tests of smoke control equipment.

- **SN EN 13501-5; SIA 183.055:2016** SNV Standard, 2016: Fire performance classification of construction products and types of construction **Part 5**: Classification using the results of external fire exposure tests of roofings.

- **SN EN 13501-6; SIA 183.056:2014** SNV Standard, 2014: Fire classification of construction products and types of construction - **Part 6:** Classification using the results of tests on the reaction to fire of electrical cables.

AUSTRIA

The **Austrian Standards Institute for Standardisation e.V. (ON)** is the national standards organisation of the Federal Republic of Austria and publishes the **ÖNORM.**

The current name is Austrian Standards ASI - the Austrian Service Centre for Standards.

- **Austrian Standards,** founded in 1920, is an association under the supervision of the Federal Ministry for Economic Affairs. At Austrian Standards, about 6,000 experts from a wide range of fields develop **ÖNORMs and ONRs (ON Rules)**.
  The ASI is the first address for access to norms, standards and rules from all over the world. In addition, Austrian Standards plus supports the application of standards with information, software and technical literature, the online management of standards (publishing), education and training (training) and proof of conformity with standards (certification).

These standards can be obtained from:

https://www.dbd.at/service/normen
https://www.austrian-standards.at

Examples:

- **OENORM EN 13501-1 ÖNORM Standard, 2009-12-01:** Fire classification of construction products and types of construction - **Part 1:** Classification using results of reaction to fire tests of construction products.

- **OENORM EN 13501-2 ÖNORM Standard, 2016-11-01:** Fire classification of construction products and types of construction - **Part 2**: Classification using results of fire resistance tests, except for ventilation systems.

- **OENORM EN 13501-3 ÖNORM Standard, 2009-12-01**: Fire classification of construction products and types of construction - **Part 3:** Classification using results of fire resistance tests of building services components: Fire resistant ducts and dampers.

- **OENORM EN 13501-4 ÖNORM Standard, 2017-01-01**: Fire performance classification of construction products and types of construction - **Part 4:** Classification using the results of fire resistance tests of smoke control systems.

- **OENORM EN 13501-5 ÖNORM Standard, 2016-11-01**: Fire classification of construction products and types of construction - **Part 5:** Classification using the results of external fire exposure tests of roofings.

- **OENORM EN 13501-6 ÖNORM Standard, 2014-04-15**: Fire classification of construction products and types of construction - **Part 6:** Classification using results of tests for reaction to fire of electrical cables.

FRANCE

The Association française de normalisation (AFNOR) is the official French organisation for standardisation. It is a member of both ISO and the European Committee for Standardisation.

It was founded in 1926 as a registered association (Association Loi 1901) of French companies. A decree from the Ministry of Industry gives AFNOR exclusive authority to approve "standards". https://www.afnor.org/

Examples:
M1 / M2 / M3 / M4 flammability tests (NF P 92-5XXX).

- **NF P92-501** Fire protection - Construction materials **- Fire behaviour tests - Hard or flexible materials with a thickness greater than 5 mm.**

- **NF P92-503** Fire protection - Building materials **- Fire behaviour test - Electrical burner test for flexible materials**

- **NF P92-504** Fire protection - Building materials - Fire behaviour test - **Flame retardancy test and flame spread test**

- **NF P92-505** Fire protection - Building materials - Fire behaviour tests - **Drop test for thermal melting materials**

- **NF P92-506** Fire protection **-** Building materials – **Soil**

- **NF P92-507** Fire protection - buildings **- interior fittings - classification by fire behaviour**
- **NF P92-512** Fire protection - buildings - fire behaviour tests - **determination of fire behaviour (classification and testing of materials)**

French standards have also introduced a classification between M1 and M4.

Accordingly

- **M1 – Non-combustible**
- **M2** - Flame retardant
- **M3** – Flammable
- **M4** - Highly flammable

ITALY

Ente Nazionale Italiano di Unificazione (Italian National Association, abbreviation UNI) is a private non-profit association that carries out regulatory activities in Italy in all industrial, commercial and service sectors, with the exception of electrical engineering and electronic competence of CEI .
UNI is recognised by the Italian State and the European Union and represents Italian regulatory activity at the International Standards Organisation (ISO) and the European Committee for Standardisation (CEN).
https://uni.com/

Examples:

- **UNI 9175: Small Burner test standard** - Reaction to fire of filled articles exposed to the action of a small flame -**PROUNI 9175 method.**

- **UNI 9175: Small Burner Test-Scope** - Burning of upholstered furniture is evaluated with or without flame and/or embers. This gives an indication of the **fire behaviour of furniture that has been exposed to a small ignition source.**

- **UNI 8456: Flammable materials that can be impacted by flames on both surfaces** - reaction to fire by application of a small flame.

- **UNI 8457: Combustible products which can be struck by flame on one surface** - Reaction to fire by application of a small flame. - Describes a method for determining the after-burning time, damaged area and dripping of a test specimen when exposed to a small flame applied to one side. (This standard does not apply to construction products for which: Test method defined in UNI EN 13501-1 applies). The method provides an indication of the fire behaviour of a product in the initial stages of a fire, under the effect of a limited volume ignition source.

- **UNI 8456: Combustible materials that can be struck by flame on both surfaces - reaction to fire by application of a small flame.** This standard describes a method for determining the after-burning time, after-burning, damaged area and dripping. This standard is applicable to all products which are vertically suspended in their intended use or which can in any case be flamed on both sides simultaneously.

  This standard does not apply to construction products, here: test method is defined in UNI EN 13501-1.

GREAT BRITAIN

The BSI Group (British Standards Institution) is a global standards organisation for standards development, training, auditing and certification. BSI tests and evaluates products and management systems worldwide according to internationally valid standards in companies in various sectors.

BSI, as the UK's national standards organisation and a founding member of ISO, is responsible for publishing British, international and European standards in English. https://www.bsigroup.com/

Examples:

- **BS 5438:** Methods of flammability of vertically oriented textile fabrics and fabric assemblies exposed to a small pilot flame.

- **BS 5867-2:2008** Specification for woven fabrics for curtains and drapes - Part 2: Flammability requirements

- **BS 476-6:1989+A1:2009** Fire tests on building materials and components - Part 6: Fire spread test methods for products.

ATTENTION: Not to be confused with GB standards, which do not refer to the UK but are Chinese standards.

CHINA:

The GB Standard (GB stands for Guobiao-Guójiā Biāozhǔn - "National Standard) is the basis for the **product test that a CCC-required product must pass in the course of CCC certification.** The CCC certification is based on the national, Chinese GB Standards and Implementation Rules. The 3C applies to both imported and Chinese products. If the product does not belong to any of the product groups previously defined by the PRC for certification and there is no corresponding GB standard, then no CCC is necessary.

The GB Standard is issued by the Standardization Administration of the People's Republic of China, an institute comparable to the Deutsches Institut für Normung e.V.(DIN). http://www.sac.gov.cn/sacen/

Example:

- **GB 8624-2012 Classification of burning behaviour of building products(Chinese standard).** The classification of the burning behaviour of building materials and interior decoration materials used specifically in China is used to evaluate the burning behaviour of materials, to advise on the development of fire safety concepts, to monitor fire safety and to implement fire safety concepts that play an important role and lead to social and economic benefits.

A further, purely tabular overview can be found on our PDF:
"Fire safety standards worldwide - table".

We have summarised these overviews of existing standards and/or statutory regulations to the best of our knowledge and belief. (Status 10/2021) The above data is of a purely informative nature. No claims can be derived from this document.