

The fire behaviour of a building material is classified according to the following schemes:

Euroclass	German		Euroclass	French	Euroclass	UK (Engl., Wales, N.I.)
EN 13501-1	DIN 4102-1	No Smoke No droplets	EN 13501-1	NF P92-507	EN 13501-1	BS 476/6 BS 476/7
A1	A1	✓ ✓	A1	non combustible	A1	non combustible
A2 - s1,d0	A2	✓ ✓	A2 - s1,d0	M0	A2 - s1/s2/s3/, d0/d1/d2	limited combustible
B/C - s1,d0	B1	✓ ✓	A2 - s1/s2/s3/, d0/d1	M1		
A2/B/C - s2/s3/, d0			B - s1/s2/s3/, d0/d1/d2		Class 0	
A2/B/C - s1, d0/d1				M2		C - s1/s2/s3/, d0/d1/d2
A2/B/C - s3, d2						
D - s1/s2/s3/, d0	B2	✓	D - s1/s2/s3/, d0/d1	M2	D - s1/s2/s3/, d0/d1/d2	Class 3
D - s1/s2/s3/, d1/d2			D - s1/s2/s3/, d0/d1			
E			E	M4	E	
F	B3		E - d2		F	
			F			

The European standard is compared with the German, French and British standards respectively.

However, since the publication in the „Bauregelliste 2002/1“ in Germany, for newly approved building materials only the standard EN 13501-1 is used for the classification.

A clear assignment of the European classifications according to the EN 13501-1 standard to the classes according to DIN, NF P or BS is not possible in many cases due to the different test criteria.

Only in the case of main group A is there extensive agreement between the previous and the new standard.



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However, as can be seen in the table, there is an overlap between the classification B1 according to DIN 4102-1 also partly overlaps with classification A2 according to EN 13501.

The fire behaviour according to EN 13501-1 has to be further specified by corresponding notes on smoke development and dripping.

Therefore, only the more general assignment of the building authority designations in the first column to the European classifications can be made unambiguously.

Classification for smoke or droplets:	
s1	No smoke
s2	Limited smoke production and smoke increase
s3	No limitation on smoke production required
d0	No droplets allowed
d1	No droplets for longer than certain time given
d2	No limitation on droplets required

A highly flammable building material (F or previously B3) may only be installed in a building if it is combined with another building material in such a way that the composite material is no longer highly flammable.

Up to class C (previously B1), building materials are considered self-extinguishing. From class E (previously B2), the fire is self-sustaining, even if the cause of the fire is removed.



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EN 13501-1 specifies a slightly different classification for floor coverings. **The classes for the fire behaviour of floor coverings are marked with the abbreviation fl (for floor).**

The assignment of building materials to classes for fire behaviour is carried out by means of fire tests.

Fire behaviour class EN 13501-1	Teststandard
A1	EN ISO 1182, EN ISO 1716, EN 138231
A2	EN ISO 1182, EN ISO 1716, EN 13823
B,C,D	EN 13823, EN ISO 11925-2
E	EN ISO 11925-2
F	No test



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