

Classification according to European Standard EN-13501-1

Definition	Construction Products		
Non-combustible materials	A1		
	A2 – s1 d0	A2 – s1 d1	A2 – s1 d2
	A2 – s2 d0	A2 – s2 d1	A2 – s2 d2
	A2 – s3 d0	A2 – s3 d1	A2 – s3 d2
Combustible materials: Very limited contribution to fire	B – s1 d0	B – s1 d1	B – s1 d2
	B – s2 d0	B – s2 d1	B – s2 d2
	B – s3 d0	B – s3 d1	B – s3 d2
Combustible materials: Limited contribution to fire	C – s1 d0	C – s1 d1	C – s1 d2
	C – s2 d0	C – s2 d1	C – s2 d2
	C – s3 d0	C – s3 d1	C – s3 d2
Combustible materials: Medium contribution to fire	D – s1 d0	D – s1 d1	D – s1 d2
	D – s2 d0	D – s2 d1	D – s2 d2
	D – s3 d0	D – s3 d1	D – s3 d2
Combustible materials: Highly contribution to fire	E	E – d2	
Combustible materials: Easily flammable	F		

The European classifications break down into codes, the 'd' part relates to **'flaming droplets and particles'** during the first 10 minutes of exposure. The index is:

D0 = none

D1 = some

D2 = quite a lot

The 's' part relates to total **smoke propagation**, during the first ten minutes of exposure.

These determine a 'smoke' index:

S1 = a little or no smoke

S2 = quite a lot of smoke

S3 = substantial smoke

Additional Class			Level Definition
Smoke emission during combustion	s	1	A little or no smoke
		2	Quite a lot of smoke
		3	Substantial smoke
Production of flaming droplets/particles during combustion	d	0	None
		1	Some
		2	Quite a lot

British Standards

As a further guide to the British standards (BS) on cladding fire testing, please see below how the older BS classifications compare to the more recent European classifications. These were based on tests for burning materials and structures governed by BS 476. This breaks down into two parts relevant to cladding:

Part 7 – surface spread of flame, which measures the spread and extent that a flame would travel across the surface of the material and;

Part 6 – fire propagation, which measures the actual contribution made by the component assembly to the growth of the fire.

British Standard	Transposition to Euro Class
Non-combustible	A1
Limited Combustibility	A2-s3,d2 (or better)
Class 0	B-s3,d2 (or better)
Class 1	C-s3,d2 (or better)
Class 3	D-s3,d2 (or better)