

## Reaction to fire sandwich panels Comparison between EN 13501-1 e BS 476

### Reaction to Fire

In broad terms, the transpositions for Reaction to Fire can be summarised as:

Old British Standard	New Euro Classes
Non-combustible	A1 or considered as A1 <i>'without the need for further testing' as defined in Commission Decision 96/603/EC dated 4th October 1996.</i>
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

### Smoke and flaming droplet risk

(1) In the EU classification system for Reaction to Fire, a construction product will be classified as Euroclass A1, A2, B, C, D, E or F depending on its tendency for 'burning'.

(2) The product testing will provide data, represented by the signs S1, S2, or S3, which indicate the tendency to release smoke. Smoke causes over 60% of deaths in fire across the EU. The measurement of smoke release has been put into these 3 broad bands that can be translated as 'a little or no smoke' S1 – 'quite a lot of smoke' S2 – 'substantial smoke release' S3.

(3) Some construction products, like these made of polystyrene, can melt and ignite to form Flaming Droplets. Wooden products, on the other hand, will tend to char before the char falls away as Flaming Particles to expose more material.

These 'flaming droplets/particles' will tend to initiate new fires away from the original point of ignition and must be considered when the products are used horizontally in ceiling or roof applications. The classification system ranks the level of release of Flaming Droplets/Particles as d0 (none), d1 (some) and d2 (quite a lot).