

The Euroclass System

The Euroclass System is a single classification system exists for all EU member states and has introduced a common method for comparing the Reaction to Fire performance of construction products.

Testing is standardised through the use of **EN 13501-1: Fire Classification of Construction Products and Building Elements.**

There are seven Reaction to Fire classification levels available: A1, A2, B, C, D, E and F for wood or wood-based products intended to be used in wall and ceiling constructions, or externally as cladding.

Additional criteria provide information on a product's tendency to produce smoke and flaming droplets or particles. For combustible products, of which timber belongs, smoke release is an important consideration and is measured for Reaction to Fire classes A2 to D.

There are three smoke intensity levels: S1, S2 and S3, with S3 being the worst. Burning droplets / particles can inflict skin burns and cause further spread of fire. Burning droplets / particles are measured for Reaction to Fire classes A2 to E. There are three classes of burning droplets: d0, d1 and d2, with d2 being the worst.

HALT treated timber species all achieve a Euroclass rating of **B-s1,d0**.

Class	Performance	Products/Examples
A1 & A2	No contribution to fire	Stones, bricks, concrete
B	Very limited contribution	Gypsum boards, FR wood
C	Limited contribution	Gypsum boards with surface
D	Acceptable contribution	Wood > 10mm / > 400 density
E	Acceptable contribution	LDF, plastic insulation
F	No requirement	Non tested materials

Classes for Smoke Development		
S1		A very limited emission of smoke / combustion gasses (120)
S2		A medium emission of smoke / combustion gasses (170)
S3		No restriction of smoke / combustion gasses (> 170)

Classes for Burning Droplets		
d0		No burning droplets or particles must be emitted
d1		No burning droplets or particles may be released in limited quantities
d2		No requirement for restriction of burning droplets and particles