



FOMiCOM
insulation solutions

The Single Burning Item (SBI) test

Assessing fire performance using time to ignition, heat release, spread of flame, smoke production rate and formation of flaming droplets/debris.

Products are then classified under six Euroclasses.

The six Euro classes, (compiled under EN 13 501-1), are as follows:

Class (A): No contribution to fire

Class (B): Very limited contribution to fire

Class (C): Limited contribution to fire

Class (D): Acceptable contribution to fire

Class (E): Acceptable reaction to fire

Class (F): No performance determined

Comparison of reaction to fire tests with current standards

Euro class	Germany	France	UK
EN 13501-1	DIN 4102	NFP 92-501	BS 476 pts 6 & 7
A	A	M0	/
	A2	M0	Class 0
B	B1	M1	Class 0
C	B1	M1	Class 1
D	B2	M2	Class 1
E	B2	M3	Class 2
F	B3	M3	Class 3

Euro class A is a very severe category primarily meant for non-combustible materials. It is unlikely, though not impossible, that composites will fall into this category. Here tests close to the existing tests are used to classify materials. These are the furnace test based on ISO 1182 and the calorimeter test based on ISO 1716.

At the other end of the scale, for products of appreciable combustibility, (classes E and F), the materials are tested using a simple ignitability test for vertical specimens based on an existing small burner test.

Materials within classes B, C and D are subjected to the Single Burning Item test.