



## EUROPEAN FIRE STANDARDS

We are often asked to explain the meaning of the how the European Standard for fire reaction compares to some of our export markets local standards. The fire resistance and fire reaction of products and building elements in the EU are evaluated according to the following criteria:

### Reaction to Fire:

The fire reaction classification is ranked from high to low, with the highest being the least reactive (least fire contributing) and the lowest the most reactive (most fire contributing):

<b>Fire Behavior</b> <ul style="list-style-type: none"><li>• Class A1 (non-combustible material)</li><li>• Class A2 (not burnable materials)</li><li>• <b>Class B (very limited contribution to fire)</b></li><li>• Class C (limited contribution to fire)</li><li>• Class D (medium contribution to fire)</li><li>• Class E (high contribution to fire)</li><li>• Class F (easily flammable)</li></ul>
<b>Smoke emission</b> <ul style="list-style-type: none"><li>• <b>Class S1 (absent or very limited smoke emission)</b></li><li>• Class S2 (average smoke emission)</li><li>• Class S3 (strong smoke emission)</li></ul>
<b>Flaming droplets production (ranked from high to low)</b> <ul style="list-style-type: none"><li>• <b>Class d0 (no dripping)</b></li><li>• Class d1 (slow dripping)</li><li>• Class S3 (high dripping)</li></ul>

### Resistance to Fire with ISOLPRO:

Normally the fire resistance classification is followed by as a time limit in minutes 15, 30, 45, 60, 90, 120, 180, 240, or 360 which shows the time the performance criteria is fulfilled during a standardized fire test.

<b>E – Integrity</b> <ul style="list-style-type: none"><li>• The integrity E is the ability of a test specimen of a separating element of building construction, when exposed to fire on one side, to prevent the passage through it of flames and hot gases and to prevent the occurrence of flames on the unexposed side. The requirements are the following:<ul style="list-style-type: none"><li>○ cracks gaps of certain dimensions</li><li>○ ignition of a cotton wool pad</li><li>○ sustained flaming on the unexposed side</li></ul></li><li>• <b>The PS1 solution surpassed 150 minutes of integrity testing, corresponding to the 120 minutes standard.</b></li></ul>
<b>I – Insulation</b> <ul style="list-style-type: none"><li>• The insulation is the ability of a test specimen of a separating element of building construction when exposed to fire on one side, to restrict the temperature rise of the unexposed face to below specified levels.</li><li>• <b>The PS1 solution surpassed 150 minutes of insulation testing, corresponding to the 120 minutes standard.</b></li></ul>

### The ISOLPRO board is certified and approved according to:

Essential Features	Performance	Standard
Reaction to fire	Class B-s1, d0	EN 1350-1
Resistance to fire - Wall type with finishes (report available for consultation)	E-120 I-120	EN 1364-1 EN 13501-2

### NOTE:

The text above is a simplification of the current national and European Standards. It has an exclusively informative value and purpose of facilitating the understanding of the properties of the cladding materials produced by Model Eco Lda. which is in no case responsible for the accuracy of the information and/or for a misinterpretation.