

Fire Testing and Classification of Pipe Boxing Products

The default standard for fire testing of construction products and building materials is the unified European standard test procedure, namely, The European Reaction to Fire Classification System (Euroclasses).

The Euroclasses were introduced by the European Commission in February 2000, to create a common platform for the comparison of the fire properties of construction materials and building products. This comprehensive testing method measures ignitability, flame spread, heat release, smoke production and flaming droplets, the results of which are split into seven classification levels. The seven classifications range from A to F (low to high) for combustibility; with sub classifications indicating smoke and flaming droplet levels. Products which have not been tested, or where the manufacturer has not provided the fire properties for the product are automatically deemed to be category F.

Unfortunately, eighteen years after the introduction of this unifying standard, many building products are not tested at all, at best some manufacturers refer to the old B.S. "Spread of Flame" test, many quote incomparable other nation test results or simply quote the Euroclass for the major material component within the product. For example there are no published Euroclass test results available at present for thin steam bent plywood pipe boxing often used in flats, social housing and education establishments.

Fire testing of the finished product using the Euroclass system is enormously important and a product cannot be legally CE marked without it. There can be a significant difference between material fire test classification under this system and the performance of that same material when incorporated into a product - shape, painted surfaces, surface finishes and adhesives etc. all contribute to the final fire classification.

Take for example our Zylo pipe boxing products. We are often asked why we do not substitute the moisture resistant structural core we use with readily available fire retardant board to produce a fire retardant product. From a production point of view this would be a very simple substitution. The answer may surprise you. Fire retardant board is a lining material and is therefore rightfully tested to the Euroclass standard without an air gap. When formed into a boxing product, it is potentially exposed to fire from both sides. This not only reduces the fire resistance down to that of standard moisture resistant board but also adds fire retardant chemicals to the combustion mix, which generates dense toxic smoke.

Given that the most common cause of death in fires is due to the inhalation of noxious gases, rather than thermal injury, then it is sensible to conclude that moisture resistant board is the preferable material for pipe boxing products, in terms of fire response characteristics and also for its suitability for use in humid conditions such as in kitchens and bathrooms.

Zylo pipe boxing and pipe casing products, including boiler casings and fixing brackets are fire tested to the Euroclass standard, and are manufactured from FSC® compliant moisture resistant board, non-toxic adhesives and a paint free thin FSC® white laminate outer shell.

Further Information

[Euroclass System Information](#)

[Zylo Pipe Boxing Declaration Of Performance \(Standard Finish\)](#)

[Zylo Pipe Boxing Declaration Of Performance \(Gloss Finish\)](#)