

related test method	EN 13238 and EN 13501-1
subject	Restrictions concerning range of substrate thicknesses in classification reports
reference of original query	TC1 N433, Helpdesk 2010-11

Problem

The revised standard EN 13238:2010 gives no information about the minimum thickness a substrate is allowed to have in the end use application.

Explanation

When we do a test with a building product the standard EN 13238 gives information which kind of standard substrate we have to use. This standard substrate is representative for the substrate which is used in the end use application. According to version EN 13238:2001 there was the rule a) in chapter 5.2 that the result of a test, where we used one of the standard substrate, is only representative when in the end use application a substrate is used with at least 6 mm thickness (for substrates of class A1 or A2) or at least 12 mm thickness respectively (for substrates of class B, C, D and E). Therefore we wrote in our classification report that the classification is valid when the product is used on a substrate with a thickness of at least 6 mm or 12 mm respectively.

According to the version EN 13238:2010 no rule about a minimum thickness for the substrate used in the end use application is available. Consequently there can be made the interpretation that in the classification report a restriction of the minimum thickness of the substrate used in the end use application is not relevant. Is this interpretation correct? According to my opinion not. An Example: SBI-tests were done using the standard substrate particle board (thickness at 12 ± 2 mm). According to the above mentioned interpretation the test results and consequently the classification is also valid for a wooden substrate with a thickness of e.g. 6 mm (and a density of at least 75% of the density of the standard particle board used in the test). Is this conclusion correct? According to my opinion not, as a thinner wooden substrate can give to a worse reaction to fire behaviour in comparison to what was determined in the tests.

Recommendation

In the classification reports according to En 13501-1 the classification shall be limited to a minimum thickness of the substrate used in the end use application. This minimum thickness is given by the minimum thickness of the standard substrate as defined in EN 13238:2010. E. g. when in the tests the standard particle board with a thickness of 12 ± 2 mm was used then in the classification report there shall be the statement that the classification is valid only for the case that the thickness of the substrate used in the end use application is at least 10 mm.

