

The ultimate basis for fire technical evaluation of products must be their performance in real fires. Therefore, it is important that any test method for classification must reflect at least one full scale scenario that is considered representative of real fires. The ISO Room/Corner Test is a large scale test deemed representative of a wall and ceiling fire.

This paper discusses possible classification criteria and their implications for surface materials tested in full scale according to Room/Corner Test ISO/DP 9705 similar to the Nordtest method NT FIRE 025. Some 20 products are, according to their behaviour in full scale, grouped into five classes.

The principles for choosing classification criteria are based on identifying conditions of heat and smoke production that is considered a threat to life and safe escape. The time elapsed from ignition to certain peak rates of smoke and heat are considered important as well as the reaction of the material when exposed to an increase of the ignition source. The average production rates of heat and smoke are also taken into account.

The classification scheme is simple, easy to apply, based on quantitative data and reflects differences in burning behaviour which are easy to comprehend. It is not necessary to use all classes; any user of the system will have the freedom to choose between performance levels. The five classes suggested here have been proposed to CEN for their consideration as a part of a European classification system.

The criteria are also compared to current national classification in Sweden and other European countries. It appears that none of the European systems give results equivalent to the ratings based on the Room/Corner Test or any other new test method.