

This report presents results from a series of 13 full scale tests of surface materials such as wood based boards, foamed plastics and wall papers. The tested products were chosen to represent differences in fire behaviour, mounting techniques and substrates.

The foamed plastics were not tested in a way representing real use. The reason for this deviation was to study the quality of the test method and not the properties of the product. The tested products were attached to walls and ceiling of a test room 2.4 m by 3.6 m and 2.4 m high having a single door opening in accordance with methods proposed by ASTM, ISO and NORDTEST.

The ignition source was a propane burner placed in a corner. The burner heat output was 100 kW for the first 10 minutes and, if flashover did not occur, then increased to 300 kW. Continuous measurements were performed of rates of heat release, flame spread and heat convected out the doorway, surface and gas temperatures, heat flux and productions of smoke and several gas species.

The results show that products ranging from highly flammable to nearly non-flammable can be tested with good resolution. The tests showed great variations between the products in fire behaviour.

The production rates of gas species varied, however, only a little. The results seem to depend more on ventilation conditions than on type of product.