Summary

A total of 13 materials have been tested according to the ISO and IMO spread of flame test methods.

Although the test methods are somewhat different in configuration and heat flux exposure of the test specimens, they give approximately the same results in terms of for example flame spread velocity as a function of imposed heat flux and minimum heat flux for flame spread.

Correlation with results from the ISO ignitability test and the flame spread tests was found for high heat flux levels (2 - 4 W cm -2).

Quintiere has presented a theory for generalizing data from the IMO test. His theory was employed on data from wood based materials.

Bearing in mind that rather few tests were performed and different equipments were used, our results showed good agreement with those reported by Quintiere /2, 3/.

Also surface temperature of the sample was measured in some tests.

A theoretical value of the surface temperature at the minimum flux for flame spread based on Quintiere's theory was calculated and compared with measured values. The results agreed well for long exposure times.

Finally the way of data reduction according to the IMO procedure /4/ was used in comparison of the two flame spread methods. Two series of values were then obtained that seemed to be correlated with each other.