Computer Models
For
Fire and Smoke

Model Name: UFSG

Very Short Description: Predictions of Upward Flame Spread and Growth on Non-Charring and Charring Materials

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References: FMRC Technical Report J.I. OROJ2.BU, November 1990
Third International Conference on Fire Safety Science, 1991 in press.

Availability: Special Agreement

Hardware: IBM, PC

Language: FORTRAN

Size: 1876 lines

Detailed Description:
Inputs:

Material properties or weight loss histories. Typical properties are:

1. Thermal properties-virgin material
2. Pyrolysis temperature
3. Char conductivity (for charring materials)
4. Heat of pyrolysis

Outputs:

Upward Flame Spread Rate
Heat Release Rate
Maximum extent of flame spread (if flame spread cannot be sustained)

Assumptions:

The pyrolysis process can be represented by a thermal pyrolysis model even for charring materials

Limitations:

The combustion and radiation models for the flames are not complete.