

# NTN 060

## Critical Failure Temperatures

**Nullifire**  
Smart Protection

### Recommendations

Within the building industry and specifically fire protection, it has been commonplace when calculating dry film thickness requirements to follow historic ASFP guidance and use the critical failure temperatures of 550°C for columns, 620°C for beams and 520°C for hollows. However, with the introduction of the ASFP Yellow Book 5, two fire designs were put forward to be followed.

Both BS5950 and BS EN 1993 (Eurocode) are structural steel designs only and have no relation to specific fire test standards for intumescent coatings.

Concerning the Eurocode design, it should not be confused with meaning that only European Fire Test data (EN 13381) can be used.

As BS EN 1993 is purely a design code for structural steel, BS476 fire test data is acceptable and commonly used within the UK market.

The below table can be used when determining which critical failure temperature should be used (see below flowchart). It should be noted however if a fire engineer is comfortable for the historic ASFP guidance temperatures be used, then as manufacturers we are also able to provide loadings based on them.

Tremco CPG UK Limited reserve the right to alter the below flowchart without prior notice, in line with company policy of continuous development and improvement.

### Technical Service

Nullifire has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Technical Services on +44 (0) 1942 251 400.

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