

# NTN 036

## Recommended Expansion Zones for Intumescent

**Nullifire**  
Smart Protection

### Purpose

During a project design, it is not uncommon for columns and/or beams to be boarded in using non-fire rated substrates.

Intumescent char carries no strong physical properties and therefore will not be able to push blocking items away, potentially impacting the ability provide the protection required when needed.

### Recommendations

Following guidance from the ASFP, a clear air gap must be factored in to allow the intumescent coating to char sufficiently. The advice is a minimum gap of 50x dry film thickness of the reactive coating to allow adequate expansion in a fire. This refers to the gap between the cladding and the protected steel section.

Continuous linear fixings [timber or metal] should be considered as part of the main beam, and duly protected from fire, unless other supporting fire test evidence can be provided.

As an alternative to calculating multiple different expansion gap requirements for a given project, a maximum approach has been developed by CPG, for simplicity purposes. This is based on guidance and test evidence specific to Nullifire intumescent and protection times required.

The advised expansion gap recommended above covers every possible DFT within the certified loading tables for each product listed.

Therefore, it is possible that this can be reduced further for specific scenarios and situations. In this instance, please contact Nullifire technical services for further assistance.

Nullifire reserve the right to alter the above 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 01942 251 400.

Max. Exp. Gap (mm)	Fire Resistance Time							
	30 minutes		60 minutes		90 minutes		120 minutes	
	I Sections	Hollows	I Sections	Hollows	I Sections	Hollows	I Sections	Hollows
Nullifire SC601	23	53	70	100	100	100	N/A	N/A
Nullifire SC801	*	*	*	*	*	*	100	100
Nullifire SC802	16	21	34	63	N/A	N/A	N/A	N/A
Nullifire SC804	*	*	*	*	100	100	100	N/A
Nullifire SC901/902	39	100	100	100	100	100	100	100