

NTN 028

Epoxy Top-coating of Single Pack Intumescent

Nullifire
Smart Protection

Statement

Epoxy topcoats are a common product used in protective coating specifications due to their hard wearing and durable nature. This is imparted from the high cross link density that is common in epoxy topcoats meaning that the number of chemical bridges between the polymers is very high leading to a rigid and inflexible topcoat,

Single pack intumescent coatings produce a sift, friable char when exposed to a heat source. They expand to around 6-100 times their original applied thickness, depending on the original thickness, through a chemical process of expansion through trapping the gases developed on the reaction to heat over a period of time. Outside factors that can influence this can have a detrimental impact on the ability of an intumescent to perform as expected in the event of a fire.

Epoxy topcoats have been tested significantly over the years and found to impart a negative effect in general over single pack intumescent coatings, both solvent and water based. This is through the rigid topcoat inhibiting the expansion of the intumescent when needed, meaning that the performance is less than expected and assessed. Due to this Nullifire do not approve epoxy-amine topcoats for use over the Nullifire intumescent range.

Of course, not all epoxy topcoats are the same, and a case by case approach may be taken, but a generic approval as is standard practice in the intumescent industry is not possible.

It is recommended that polyurethane, or acrylic urethane be used in order to achieve the desired level of protection, with improved durability, but without impact on performance of the intumescent described above.

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 251400.