Intumescent paint failure at Wigan JSC

Intumescent Paint Systems are used to help fireproof structural steel, steel sections in steelwork or cast iron and can be used externally or internally, on small or larger areas. Intumescent coatings are generally available as water-based or solvent based variations.

In the instance at Wigan JSC a failure in the intumescent Paint System occurred to the external steel frame supporting a retained façade.

Reasons for failings include:

* Extended periods between coat applications;

* Insufficient drying times allowed;

* Inadequate steel preparation;

* Lack of abrading coat;

* Incompatibility of paint systems.

Weather conditions:

* Humidity (to be 85% or below when applying);

* Air temperature (to be 5° and above);

* Steel temperature (to be 5° and above);

* Dew point (must be above 0°).

The material should be applied at temperatures in excess of 5° in condition of high relative humidity i.e. 80-85% good ventilation conditions are essential. Substrate temperatures shall be at least 3° above the DEW.

The following advice isa brief outline of good practice and should be applied as a minimum standard to prevent failings:

• **Mechanical abrasion of the surface**

• **Steel must be de greased and washed down prior to paint application**

• **Undertake any spot priming to any rusty areas**

• **Primer must be 250mc max (anything above must be abraded to minimise DFT)**

• **Your steel size will determine paint thickness (please check specification)**

• **Carry out wet and dry film tests at regular intervals (please check manufacturers specification). This is arguably the most important measurement made during the application and inspection of protective coatings.**

• **Ensure compatibility of primer and intumescent paint system.**

SHEQ Alert date:	mm/yyyy			Display until:		Mm/dd/yyyy		
Distribution:	Morgan Sindall	x	Supply Chain	x	Plant Hire Desk	x	Morgan Sindall Group	x
Communication:	Toolbox talks / briefings		x	Noticeboards		x	SHEQ update	x

Everyone has the right to be
100% Safe