

MATERIAL PERFORMANCE SPECIFICATION FOR FIRE PROTECTION
CAST EPOXY INTUMESCENT (INTERACTIVE COLUMNS)

The Specification below is designed to be read with M61/145 cast epoxy intumescent manufactured off site and installed onsite. It is a requirement that alternative materials put forward for consideration must attain the same performance criteria as that set out as follows:

1.0 Environmental

- 1.1 The application must be capable of application with the following minimum environment conditions
 - 1.1.1 The Minimum temperature of application 5° C
 - 1.1.2 The maximum Humidity of 85%
 - 1.1.3 A Minimum of 2° above Dew Point
- 1.2 The material must be able to withstand a class C5 environment (See table below for definitions)
 - 1.2.1 External extreme conditions with temperatures in excess of 35°C and
 - 1.2.2 Humidity in excess of 85%.
 - 1.2.3 The material must be able to withstand cascading or pooling water without delaminating or blistering
 - 1.2.4 The material must be able to withstand freezing temperatures without thermal shocking of the coating

or
- 1.3 The material must be able to withstand a class C4 environment

or

- 1.4 The material must be able to withstand a class C1 environment Internally constant temperature and humidity controlled Schools, offices etc.

2.0 Decoration

- 2.1 For the purpose of definition the National Building Specification (NBS)
- 2.2 Clause M61 145 On site installation of castings manufactured by Interact Fire Solutions Limited 01694 751394
- 2.3 Finish is generally in accordance with clause 460 High Decoration
 - 2.3.1 No pin holing
 - 2.3.2 No runs
 - 2.3.3 No "Orange Peeling"
 - 2.3.4 A sample of the finish should be presented to the client prior to progressing the finishing coats as per M61-260
 - 2.3.5 A performance coating (polyurethane or polysiloxane) is required to meet the maintenance criteria in 5.0

2.4 All joints are to be filled to a high standard leaving no evidence of jointing

3.0 Application

3.1 Site installed by approved installers only

3.2 Allow inspection by the casting manufacturer as per M61-270

3.3 Seek the primer specification and confirm compatibility with the epoxy intumescent adhesive

4.0 Fire Resistance

4.1 Generally as M61-145 detailed below

4.2 Specify the fire protection requirement

4.3 Secure the Hp/A and ensure the installed thickness meets the required standard.

5.0 Maintenance

5.1 The system must be maintenance free for up to 20 years with the exception of physical damage

5.2 The system must be free of periodical inspection to meet the warranty requirements (check alternative systems with the manufacturer) Thin film intumescent require regular inspection and periodic over-coating.

5.3 Over coating should be by any compatible material and not subject manufacturers prior approval

5.4 Repairs to physical damage must not be visible

5.5 A two pack filler or where a non-performance coating is used a single pack filler must be suitable for the system

6.0 Other requirements

6.1 Cast epoxy intumescent has sound insulation properties required for the building acoustics.

6.2 Cast epoxy has a high standard of impact resistance. An alternative solution must be shown to meet an equivalent standard

EN ISO 12944-2 1998

Table 1 - Atmospheric-corrosivity categories and examples of typical environments

Corrosivity Category	Mass loss per unit surface/thickness loss (after first year of exposure)				Examples of typical environments in a temperature climate (informative only)	
	Low-carbon Steel		Zinc		Exterior	Interior
Mass Loss g/m ²	Thickness Loss µm	Mass Loss g/m ²	Thickness Loss µm			
C1 very low	≤ 10	≤ 1.3	≤ 0.7	≤ 0.1	-	Heated buildings with clean atmospheres, e.g. offices, shops, schools, hotels
C2 low	> 10 to 200	> 1.3 to 25	> 0.7 to 5	> 0.1 to 0.7	Atmospheres with low level of pollution. Mostly rural areas.	Unheated buildings where condensation may occur, e.g. depots, sports halls.
C3 medium	> 200 to 400	> 25 to 50	> 5 to 15	> 0.7 to 2.1	Urban and industrial atmospheres, moderate sulphur dioxide pollution. Coastal areas with low salinity.	Production rooms with high humidity and some air pollution, e.g. food processing plants, laundries, breweries, dairies.
C4 high	> 400 to 650	> 50 to 80	> 15 to 30	> 2.1 to 4.2	Industrial areas and coastal areas with moderate salinity.	Chemical plants, swimming pools, coastal ship - and boatyards.
C5-I very high (industrial)	> 650 to 1500	> 80 to 200	> 30 to 60	> 4.2 to 8.4	Industrial areas with high humidity and aggressive atmosphere.	Buildings or areas with almost permanent condensation and with high pollution.
C5-M very high (marine)	> 650 to 1500	> 80 to 200	> 30 to 60	> 4.2 to 8.4	Coastal and offshore areas with high salinity.	Buildings or areas with almost permanent condensation and with high pollution.

NOTES:

1. The loss values used for the corrosivity categories are identical to those given in ISO 9223.
2. In coastal areas in hot, humid zones, the mass or thickness losses can exceed the limits of Category C5-M. Special precautions must therefore be taken when selecting protective paint systems for structures in such areas.