CRYSTIC® FIREGUARD 75E (B) EXCEL

Intumescent Fire Retardant Topcoat

Introduction
Crystic Fireguard 75E (B) Excel is an intumescent topcoat based on an unsaturated polyester resin. Crystic Fireguard 75E (B) Excel is available in standard in white, grey and black only, and the information contained in this technical datasheet applies to all three versions. Other colours can be made subject to a minimum order quantity.

Applications
Crystic Fireguard 75E (B) Excel is suitable for use in the marine, building and transport industries.

Features and Benefits
Crystic Fireguard 75E (B) Excel gives outstanding fire protection to FRP laminates which are accidentally exposed to direct flaming. It is also suitable as a fire-retardant coating on wood and other slightly porous surfaces. However, due to lack of adhesion after intumescence, it is not suitable for use on metals. Please contact Scott Bader for use on materials not listed.

Approvals
A properly applied, fully cured coating of Crystic Fireguard 75E (B) Excel on a laminate made from standard general purpose resin can obtain a Class 1 rating according to BS476 Part 7.

Pot Life
The pot life of Crystic Fireguard 75E (B) Excel with 2% Accelerator G and 2% Butanox M50 is 6-10 minutes at 25°C. The pot life can be altered using different levels of Accelerator. The gelcoat, mould and workshop should all be at, or above, 15°C before curing is carried out.

Formulation
Crystic Fireguard 75E (B) Excel should be allowed to attain workshop temperature (18°C-20°C) before use. Stir well by hand, or with a low shear mixer to avoid aeration, and then allow to stand to regain thixotropy. Crystic Fireguard 75E (B) Excel requires addition of accelerator and catalyst to start the curing reaction.

The accelerator must be thoroughly dispersed in the gelcoat. The accelerated gelcoat will remain stable at ambient temperatures (25°C) for approx. one week. Shortly before use, the correct amount of catalyst should be added and stirred into the accelerated gelcoat The recommended catalyst is Butanox M50 (or other equivalent catalyst) which should be added at 2%. (Please consult our Technical Service Department before using other catalysts).

The catalyst should be thoroughly incorporated into the Crystic Fireguard 75E (B) Excel, with a low shear mechanical stirrer where possible. Curing should only be carried out at temperatures above 15°C. The Crystic Fireguard 75E (B) Excel, the surface to be coated and the workshop should all be at, or above, this temperature.

Application
Crystic Fireguard 75E (B) Excel should be applied on the reverse side of a GRP laminate, not the gelcoat face. The surface must be clean and dry, with any sheen or gloss removed. Customers must satisfy themselves that Fireguard 75E (B) Excel sufficiently adheres to the laminate and may be required to abrade the surface prior to application, particularly if the laminate is more than 1 month old.

An application of 900 - 1000 g/m^2 will give the recommended minimum coating thickness of 0.6 – 0.7mm (0.03 inch). To meet the fire standards outlined in the Approvals section above, a minimum application thickness of 0.7mm is required.

Crystic Fireguard 75E (B) Excel has been designed for brush application. Where application to wood or other substrates is required, the users should satisfy themselves that a serviceable bond can be obtained. Crystic Fireguard 75E (B) Excel will be touch dry 1 - 2 hours after application under normal ambient conditions.

Additives
The addition of fillers or pigments to Crystic Fireguard 75E (B) Excel is likely to affect the cure of this material and is not recommended.

Recommended Testing
It is recommended that customers test Crystic Fireguard 75E (B) Excel before use under their own conditions of application to ensure the required surface finish is achieved.

Physical Data – Uncured
The following tables give typical properties of Crystic Fireguard 75E (B) Excel when tested in accordance with SB, BS EN or BS EN ISO test methods.

Property	Unit	Liquid Topcoat
Appearance		Opaque, Coloured
Viscosity at 25°C		Thixotropic
Specific Gravity at 25°C		1.4
Volatile Content	%	17
Stability at 20°C	Months	4
Stability at 40°C	Months	3
Geltime at 25°C Using 2% Accelerator G and 2% Butanox M50 (or Other Equivalent Catalyst)	Minutes	6 - 10

Physical Data – Uncured

Property	Unit	Fully Cured *Topcoat (Unfilled Casting)
Barcol Hardness (Model GYZJ 934-1)		40
Specific Gravity at 25°C	°C	1.46

* Curing Schedule - 24 hrs at 20°C, 8 hrs at 60°C.

Post Curing
For many applications, Crystic Fireguard 75E (B) Excel will perform adequately when cured at workshop temperature (20°C). However, for optimum fire retardant properties it should be allowed to cure for 24 hours at 20°C, and then be oven-cured for 8 hours at 60°C.

Storage
Crystic Fireguard 75E (B) Excel should be stored in its original container and out of direct sunlight. It is recommended that the storage temperature should be less than 20°C where practical, but should not exceed 30°C. Ideally, containers should be opened only immediately prior to use.

Packaging
Crystic Fireguard 75E (B) Excel is supplied in 25Kg and 225Kg containers.

Health and Safety
Please see separate Material Safety Data Sheet.

Version 2 : February 2013

SCOTT BADER COMPANY LIMITED
Wollaston, Wellingborough, Northamptonshire, NN29 7RL
Telephone: +44 (0) 1933 663100
Facsimile: +44 (0) 1933 666623
www.scottbader.com