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Testing. Advising. Assuring.

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Mr Markus Woehr
Sika Deutschland GmbH
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Germany

Dear Sir

Re: Compatibility Of The Reactive Coating With Produced By PEINTURES LAGAE 'FINIFER INT' and 'FINIFER EXT' Topcoats

The performance of intumescent coatings may be affected by the topcoat applied over the reactive coating, therefore test data demonstrating reactive coating compatibility with the protective finishing coat should be provided.

In order to comply with ETAG 018 Parts 1 and 2 compatibility requirements, six 500mm high by 500mm high by 5mm thick steel plates referenced No. A1, No. A2, No. 9, No. 10, No. 11 and No. 12 were protected with intumescent coating systems. All plates were abrasive blast cleaned to ISO 8501-1 Sa2.5 before protection system application. Details of each specimen are summarised in Table 1.

Table 1: Summary of the specimens

Plate Reference	Plate Purpose	Primer Reference	Steel Surface Preparation	Primer DFT (µm)	Basecoat (Protection Material) Reference	Basecoat DFT EXCLUDING PRIMER (µm)	Topcoat Reference	Nominal Topcoat DFT (µm)
A1	Control[1]	Sika® Permacor® 2706 EG	ISO 8501-1 Sa2.5	45	Sika® Unitherm® Steel W-120	1105	-	-
A2	Control[1]	Sika® Permacor® 2706 EG	ISO 8501-1 Sa2.5	45	Sika® Unitherm® Steel W-120	1065	-	-
9	Topcoat compatibility	Sika® Permacor® 2706 EG	ISO 8501-1 Sa2.5	50	Sika® Unitherm® Steel W-120	1103	FINIFER INT	80
10	Topcoat compatibility	Sika® Permacor® 2706 EG	ISO 8501-1 Sa2.5	50	Sika® Unitherm® Steel W-120	1043	FINIFER INT	80
11	Topcoat compatibility	Sika® Permacor® 2706 EG	ISO 8501-1 Sa2.5	50	Sika® Unitherm® Steel W-120	1186	FINIFER EXT	80
12	Topcoat compatibility	Sika® Permacor® 2706 EG	ISO 8501-1 Sa2.5	50	Sika® Unitherm® Steel W-120	1142	FINIFER EXT	80

DFT: Dry Film Thickness
[1] Protection system as used in the initial type testing

The data referred in this letter relates to fire tests performed at the premises of Sika Deutschland GmbH. The carried out fire tests were witnessed by representatives of Warrington Certification.

The plates were fire tested utilising the heating requirements of BS EN 1363-1 to assess the effect of a topcoat on the ability of the intumescent coating to maintain its fire protection performance. The performance of the coating referenced 'Sika® Unitherm® Steel W-120' was assessed adopting the principles defined in the ETAG 018 Parts 1 and 2. The specific ETAG 018 Part 2 requirements state that topcoat compatibility is deemed verified when the average time to achieve a steel temperature of 500°C for the plates with topcoat is not less than 85% of the average time achieved by the 'control' specimens. Also no single result shall be less than 80% of the average time to reach 500°C of the 'control' plates.

The results of the tests show that the system with 'FINIFER INT' or 'FINIFER EXT' topcoat applied over a single pack intumescent coating known as 'Sika® Unitherm® Steel W-120' complies with the criteria of acceptability given in ETAG 018 Part 2. The results of the tests are detailed in Table 2.

Table 2: Evaluation results

Plate Reference	Basecoat DFT EXCLUDING PRIMER (µm)	Time To Reach 500°C (minutes)	Corrected Time To Reach 500°C (minutes)	Mean Time To Reach 500°C (minutes)	Mean Comparison (%)	Individual Deviation (%)	Resut (Pass/Fail)
A1	1105	45	41	42.0	-	-	Control
A2	1065	46	43				
9	1103	49.2	45	45	107.8	106.3	Pass
10	1043	47.8	46			109.2	
11	1186	53.9	45	46	110.2	108.3	Pass
12	1142	53.7	47			112.1	

DFT: Dry Film Thickness

I trust the above comments are acceptable.

Yours faithfully,

D Podolski
Senior Certification Engineer
Exova Warringtonfire