

Sika[®] Unitherm[®]-120 Steel W New

DECLARATION OF PERFORMANCE

No. 68359423

1	UNIQUE IDENTIFICATION CODE OF THE PRODUCT-TYPE:	68359423
2	INTENDED USE/S	EAD 350402-00-1106: ETA 20/1197:2020 Reactive Coating for the Fire Protection of Steel Elements
3	MANUFACTURER:	Sika Deutschland GmbH Kornwestheimer Straße 103-107 70439 Stuttgart
4	AUTHORISED REPRESENTATIVE:	
5	SYSTEM/S OF AVCP:	System 1
6b	EUROPEAN ASSESSMENT DOCUMENT:	EAD 350402-00-1106
	European Technical Assessment:	ETA 20/1197 of 17/12/2020
	Technical Assessment Body:	Element Materials Technology Rotterdam B.V.
	Notified body/ies:	0761, 2812

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7 DECLARED PERFORMANCE/S

Sika® Unitherm®-120 Steel W New has been assessed as being compatible with the following primers and top coats:

Primers and Primer Sets				
Primer Reference	Primer Type	Tested Nominal Primer DFT (mm)	Permitted Primer Thickness Range (mm) ¹	
			Minimum	Maximum
Generic primer type	Alkyd ²	0.050 and 0.120	0.025	0.180
Generic primer type	Zinc rich epoxy ²	0.080	0.040	0.120
Generic primer type	Zinc silicate ²	0.070	0.035	0.105
Sika® Permacor® 2706 EG ²	Two component epoxy ²	0.030 and 0.060	0.015	0.090
Sika® Permacor®-1705 ²	Solvent containing single component zinc-phosphate primer ²	0.050	0.025	0.075
Primer 1 ^{3.1}	See note 3.1	0.030	0.015	0.045
Primer 2 ^{3.1}	See note 3.1	0.030/0.030	0.015/0.015	0.045/0.045
Primer 3 ^{3.1}	See note 3.1	0.030/0.085	0.015/0.015	0.045/0.125
(SikaCor® Zinc ZS + Sika® Permacor® 2706 EG) ^{3.2}	SikaCor® Zinc ZS: Zinc rich epoxy + Sika® Permacor® 2706 EG: Two component epoxy	(0.050 + 0.050) 0.100	(0.025 + 0.025) ⁶ 0.050	(0.060 + 0.060) ⁶ 0.120
(SikaCor® EG Phosphat Plus + SikaCor® EG1 Plus + SikaCor® EG4) ^{3.2}	SikaCor® EG Phosphat Plus: Epoxy zinc phosphate + SikaCor® EG1 Plus: Epoxy intermediate coat + SikaCor® EG4: A two pack Polyurethane topcoat	(0.066 + 0.066 + 0.066) 0.198	(0.033 + 0.033 + 0.033) ⁶ 0.099	(0.080 + 0.080 + 0.080) ⁶ 0.240
SikaCor® Aktivprimer Plus (corroded) ⁴	Single component corrosion protection primer containing zinc phosphate	0.070	0.035	0.105
Sika® Poxicolor® Primer HE Neu (corroded) ⁴	Two component epoxy primer containing zinc phosphate	0.090	0.045	0.135
Sika® Permacor® 2706 EG (galvanised) ^{5.1}	Two component epoxy	0.050	0.025	0.075
Primer 4 (Galvanised) ^{5.2}	See note 5.2	0.090	0.045	0.135

DFT: Dry Film Thickness

¹ The permitted theoretical minimum and maximum DFTs cannot be less or exceed the DFT for each product as recommended by the manufacturer. The practical information given by the manufacturer must be followed

² The generic approval is applicable to other primers from the same generic group provided the thickness is within the tolerance given. The primer does not cover galvanised steel

^{3.1} The specific primer does not cover galvanised steel. The specific product trade name is replaced by the alternative and not included in this ETA when the ETA is publicly available. The approval is applicable to specific primer/primer set (trade name and type) and no generic approach is possible. Specific primer must be tested and included into the ETA before it can be applied in practice. Complete details for each approved product are deposited at Element Materials Technology Rotterdam B.V. and Sika Deutschland GmbH, and available on request. Sika Deutschland GmbH is responsible to ensure that Sika® Unitherm®-120 Steel W New is used only with approved to EAD 350402-00-1106 and listed in this ETA compatible product in respect of both ambient and fire conditions and not to provide any incorrect top coat reference or misleading details on request

^{3.2} The approval is applicable to specific primer/primer set (trade name and type) and no generic approach is possible. The primer does not cover galvanised steel

⁴ The approval is applicable to specific primer (trade name and type) and no generic approach is possible. Steel plate was shot blast cleaned to ISO 8501-1 Sa2.5 and left outside before got covered with rust but no pitting visible. Then hand tool cleaning method (wire brush) was used to prepare steel surface to grade St2 according to ISO 8501-1 prior application of primer

^{5.1} The approval is applicable to specific primer only (trade name and type) and no generic approach is possible. The approval covers galvanised steel

^{5.2} The approval covers galvanised steel. The specific product trade name is replaced by the alternative and not included in this ETA when the ETA is publicly available. The approval is applicable to specific primer/primer set (trade name and type) and no generic approach is possible. Specific primer must be tested and included into the ETA before it can be applied in practice. Complete details for each approved product are deposited at Element Materials Technology Rotterdam B.V. and Sika Deutschland GmbH, and available on request. Sika Deutschland GmbH is responsible to ensure that Sika® Unitherm®-120 Steel W New is used only with approved to EAD 350402-00-1106 and listed in this ETA compatible product in respect of both ambient and fire conditions and not to provide any incorrect top coat reference or misleading details on request

⁶ Each product should be increased/reduced as recommended by the manufacturer in order to ensure compatibility

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Top Coats				
Top Coat Reference ¹	Top Coat Description ¹	Tested Nominal Top Coat DFT (mm)	Permitted Top Coat Thickness Range (mm)	
			Minimum	Maximum ²
Top Coat 2 ³	A two component, high gloss, polyurethane	0.050	0.050	0.075
Top Coat 1 ³	A single pack alkyd	0.040	0.040	0.060
Sika® Unitherm® Top S	A high build single pack	0.060 - 0.100	0.060	0.150
Sika® Unitherm® Top W	A single pack water based	0.060	0.060	0.090
SikaCor® EG-5	A two pack polyurethane top coat with good gloss and colour retention	0.080 -0.100	0.080	0.150
SikaCor®-870 W	A single pack polyurethane	0.100	0.100	0.150

DFT: Dry Film Thickness

¹ The approval is limited to the specific product (trade name and type) and no generic approach is possible

² The permitted theoretical maximum DFT cannot exceed the DFT for each product as recommended by the manufacturer. The practical information given by the manufacturer must be followed

³ The specific product trade name is replaced by the alternative and not included in this ETA when the ETA is publicly available. The results are only applicable to the specific tested product (trade name and type) and no generic approach is possible in relation to the trade name or type of a top coat. Each top coat must be tested and included into the ETA before it can be applied in practice. Complete details for each approved product are deposited at Element Materials Technology Rotterdam B.V. and Sika Deutschland GmbH, and available on request. Sika Deutschland GmbH is responsible to ensure that Sika® Unitherm®-120 Steel W New is used only with approved to EAD 350402-00-1106 and listed in this ETA compatible product in respect of both ambient and fire conditions and not to provide any incorrect top coat reference or misleading details on request

Sika® Unitherm®-120 Steel W New has been assessed as having passed the requirements for durability according to EAD 350402-00-1106 with and without the top coats:

Top Coat Reference ¹	Topcoat Description ¹	Approved Top Coat Colours	Permitted Top Coat Thickness Range (mm)	Durability Approvals Based On The Carried Out Testing			
				Type Z ₂	Type Z ₁	Type Y	Type X
No Top Coat	-	-	-	✓			
Sika® Unitherm® Top W	A single pack water based topcoat	All Colours	0.060 - 0.090	✓			
SikaCor®-870 W	A single pack polyurethane topcoat	All Colours	0.100 - 0.150	✓			
Sika® Unitherm® Top S	A high build single pack topcoat	All Colours	0.060 - 0.150	✓	✓		
Top Coat 1 ²	A two component, high gloss, polyurethane	All Colours	0.040 - 0.060	✓	✓		
Top Coat 2 ²	A single pack alkyd	All Colours	0.050 - 0.075	✓	✓	✓	✓
Sika® Unitherm® Top S	A high build single pack topcoat	All Colours	0.100 - 0.150	✓	✓	✓	✓
SikaCor® EG 5	A two pack polyurethane topcoat with good gloss and colour retention	All Colours	0.080 - 0.150	✓	✓	✓	✓

¹ The approval is limited to the specific product (trade name and type) and no generic approach is possible

² The specific product trade name is replaced by the alternative and not included in this ETA when the ETA is publicly available. The results are only applicable to the specific tested product (trade name and type) and no generic approach is possible in relation to the trade name or type of a top coat. Each top coat must be tested and included into the ETA before it can be applied in practice. Complete details for each approved product are deposited at Element Materials Technology Rotterdam B.V. and Sika Deutschland GmbH, and available on request. Sika Deutschland GmbH is responsible to ensure that Sika® Unitherm®-120 Steel W New is used only with approved to EAD 350402-00-1106 and listed in this ETA compatible product in respect of both ambient and fire conditions and not to provide any incorrect top coat reference or misleading details on request

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Product: Reactive coating		Intended use: Fire protection of structural steel elements
Assessment method	Essential characteristic	Product performance
BASIC WORKS REQUIREMENT 2: SAFETY IN CASE OF FIRE		
EN 13501-1	Reaction to fire	Class E
EN 13501-2	Fire resistance	(R15 to R120) - IncSlow (I/H Beams and Columns) and (R15 to R120) - IncSlow (Hollow Beams) and (R30 to R120) - IncSlow (Hollow Columns) (see Annex A) ¹
BASIC WORKS REQUIREMENT 3: HYGIENE, HEALTH AND THE ENVIRONMENT		
Manufacturer's declaration and indoor air quality	Content, emission and or release of dangerous substances	Product specification doesn't contain dangerous substances given in Annex XVII of REACH and the ECHA Candidate List of Substances of Very High Concern Use categories: IA1 and S/W2 Results for reactive coating to DIN ISO 16000-6 after 28 days: TVOC (770µg/m ³) ²
BASIC WORKS REQUIREMENT 4: SAFETY AND ACCESSIBILITY IN USE		
EAD 350402-00-1106 Clause 2.2.4 and Clause 2.2.5	Adhesion and Durability	<ul style="list-style-type: none"> • Primer and top coat compatibility • Type X durability • Type Y durability • Type Z₁ durability • Type Z₂ durability
EAD 350402-00-1106 Table 4	Identification	Thermoanalytical analyses (TG) and Infrared spectroscopy analyses (IR)

¹ Assessments for I/H beams and columns, and hollow beams concern fire resistance periods up to 150 minutes. Therefore, table of results for additional times also form part of this European Technical Assessment.

² TVOC was determined in accordance with DIN ISO 16000-6 instead of EN 16516 that is quoted in EAD 350402-00-1106.

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**8 APPROPRIATE TECHNICAL DOCUMENTATION AND/OR -
SPECIFIC TECHNICAL DOCUMENTATION**

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Name: Thomas Kerkmann
Function: Head of Industrial Coatings

Name: Robin Rohleder
Function: Market field Manager Fire protection

At Vaihingen on 27 May 2021

At Vaihingen on 27 May 2021






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End of information as required by Regulation (EU) No 305/2011

FULL CE MARKING

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Sika Deutschland GmbH	
DoP no. 68359423	
EAD 350402-00-1106; ETA 20/1197:2020	
Notified Body 0761, 2812	
Reactive Coating for the Fire Protection of Steel Elements	
Reaction to fire	Class E
Fire resistance	(R15 to R120) – IncSlow (I/H Beams and Columns) and (R15 to R120) – IncSlow (Hollow Beams) and (R30 to R120) – IncSlow (Hollow Columns)
Release of dangerous substances	Product specification doesn't contain dangerous substances given in Annex XVII of REACH and the ECHA Candidate List of Substances of Very High Concern
Adhesion and Durability	<ul style="list-style-type: none"> • Primer and top coat compatibility • Type X durability • Type Y durability • Type Z₁ durability • Type Z₂ durability
Identification	Thermoanalytical analyses (TG) and Infrared spectroscopy analyses (IR)

<http://dop.sika.com>

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ECOLOGY, HEALTH AND SAFETY INFORMATION (REACH)

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety related data.

LEGAL NOTE

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the products suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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