BUILDING TRUST

Sikafloor®-405 Balcony System

YTELSESERKLÆRING

02080103010000000171148
02080103011000000011148
02080103012000000011148
02080103013000000011148

1	**PRODUKTYPENS ENTYDIGE IDENTIFIKASJONSKODE:**	02080103010000000171148 02080103011000000011148 02080103012000000011148 02080103013000000011148
2	**TILSIKTET BRUKSOMRÅDE:**	Sikafloor®-405 Balcony System is for use as aliquid-applied roof waterproofing kit to resist the passage of water to the building's internal structure, where Essential Requirements 2 Safety in case of fire, 3 Hygiene, health and theenvironment and 4 Safety in use of Directive 89/109/ECC, including the aspect of durability, apply.
3	**FABRIKANT:**	Sika Limited Sika Liquid Plastics Sika House, Miller Street, Preston PR1 1EA, United Kingdom
4	**OPPNEVNT REPRESENTANT:**	-
5	**SYSTEM FOR VURDERING OG KONTROLL AV YTEEVNE:**	System 3
6b	EUROPEISK BEDØMMELSES DOKUMENT:	ETA-13/0231
	Europeisk Teknisk Bedømmelse:	ETAG 005-6:2000
	Teknisk bedømmelsesorgan:	British Board of Agrèment
	Teknisk kontrollorgan (hEN) / vurderingsorgan (ETA):	0836

7 ANGITT YTELSE

Vesentlige egenskaper	Ytelse	Test Standard	Harmonisert Teknisk Spesifikasjon
External fire performance Part 1 – 4	BRoof(t1)(1)	ENV 1187	
Reaction to fire	Euroclass E	EN 13501-1	
Categorization by working life:	W3		
Categorization by climatic zones:	M		
Categorization by imposed loads:			
most compressible substrate:	P4	According to ETAG 005-6:2000, 4.3.3	ETAG 005-6:2000
least compressible substrate	P4		
Categorization by roof slope:	S1 to S4		
Categorization by surface Temperature			
Lowest: Highest:	TL3 TH4		
Statement on dangerous substances	None contained		
Slipperiness	NPD	EN 13893	

(1) The tests were carried out on a non-combustible, calcium silicate board substrate at a pitch of 0-20 °C.

FOR NÆRMERE INFORMASJON:

Sika Norge AS
Sanitetsveien 1,
NO-2013 SKJETTEN, Norge

tlf. +47 67 06 79 00
www.sika.no

8 RELEVANT TEKNISK DOKUMENTASJON OG/ELLER SPESIFIKK TEKNISK DOKUMENTASJON

Ytelsen for varen som angitt i pkt. 1 og 2, er i samsvar med ytelsen angitt i pkt. 7. Denne ytelseserklæringen er utstedt i samsvar med forskrift (EU) nr. 305/2011 på eget ansvar av produsenten, som angitt i pkt. 3.

Undertegnet for og på vegne av produsenten av:

04/ 2013	04/2013
R&D Man.	Tech. Man
. . . . .	. . . . .

Ovenstående informasjon i samsvar med krav i EU-forordning nr. 305/2011

RELATERT YTELSESERKLÆRING

Produktnavn	Harmonisert teknisk spesifikasjon	DoP nummer
-	-	-.

HELSE, MILJØ OG SIKKERHETS INFORMASJON (REACH)

Brukere skal alltid forholde seg til sist oppdaterte versjon av produktdatablad og HMS-datablad for det aktuelle produktet. Kopier av gjeldende versjoner finnes på Sika Norges internettsider: www.sika.no.

PRODUKTANSVAR

Denne informasjonen og i særdeleshet anbefalingene i forbindelse med anvendelse av Sika-produkter er gitt i god tro, basert på Sikas inneværende kunnskap og erfaring med produktene når de er riktig lagret, behandlet og anvendt under normale forhold. I praksis vil forskjellene i materialer, underlag og lokale forhold være av en slik karakter at verken denne informasjonen, andre skriftlige anbefalinger eller noen annen form for råd kan innebære noen garanti med hensyn til det bearbeidede produktets omsetnings-potensial eller egnethet for et bestemt formål, ei heller noen annen form for juridisk ansvar. Tredjeparts eiendomsrett må respekteres. Enhver ordre aksepteres i henhold til Sikas gjeldende salgs- og leverings¬betingelser. Brukere skal alltid forholde seg til sist oppdaterte versjon av produktdatablad og HMS-datablad for det aktuelle produktet. Kopier av gjeldende versjoner finnes på Sika Norges internettsider.

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Authorised and notified according to Article 10 of the Council Directive (89/106/EEC) of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products.

BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

Designated by Government to issue European Technical Approvals

Member of EOTA

European Technical Approval ETA-13/0231

Trade name:	Sikafloor 405
Holder of approval:	Sika Services AG BU Contractors Tüffenwies 16 CH-8048 Zürich Switzerland Tel: + 41 58 436 40 40 Fax: + 41 58 436 43 43 e-mail: sika@sika.ch
Generic type and use of construction product:	Liquid-applied waterproofing using kits based on polyurethane for use on roofs, terraces and balconies
Valid from: to:	23 May 2013 22 May 2018
Manufacturing plant:	Sika Liquid Plastics Sika House Miller Street Preston Lancashire PR1 1EA United Kingdom
This European Technical Approval contains:	5 pages including one Annex which forms an integral part of the document.

I LEGAL BASES AND GENERAL CONDITIONS

1 This European Technical Approval is issued by the British Board of Agrément in accordance with:

- Council Directive 89/106/EEC of 21 December 1988 [Construction Products Directive (CPD)] on the approximation of laws, regulations and administrative provisions of Member States relating to construction products[1], modified by the Council Directive 93/68/EEC of 22 July 1993[2], and Regulation (EC) No 1882/2003 of the European Parliament and the council[3]
- UK implementation of CPD Statutory Instruments 1991, No 1620. The Building and Building Construction Products Regulations 1991 — made 15 July 1991, laid before Parliament 22 July 1991, coming into force 27 December 1991, and amended by the Construction Products (Amendment) Regulations 1994 (Statutory Instruments 1994, No 3051)
- Common Procedural Rules for Requesting, Preparing and the Granting of European Technical Approvals set out in the Annex to Commission Decision 94/23/EC[4]
- Guideline for European Technical Approval of *Liquid Applied Roof Waterproofing Kits* ETAG 005, edition March 2000, Part 1 *General* and Part 6 *Specific Stipulations for Kits Based on Polyurethane*.

2 The British Board of Agrément is authorised to check whether the provisions of this European Technical Approval are met. Checking may take place in the manufacturing plant. Nevertheless, the responsibility for the conformity of the products to the European Technical Approval and for their fitness for the intended use remains with the holder of the European Technical Approval.

3 This European Technical Approval is not to be transferred to manufacturers or agents of manufacturers other than those indicated on page 1, or manufacturing plants other than those indicated on page 1 of this European Technical Approval.

4 This European Technical Approval may be withdrawn by the British Board of Agrément, in particular after information by the Commission on the basis of Article 5(1) of Council Directive 89/106/EEC.

5 Reproduction of this European Technical Approval, including transmission by electronic means, shall be in full. However, partial reproduction can be made with the written consent of the British Board of Agrément. In this case partial reproduction has to be designated as such. Texts and drawings of advertising brochures shall not contradict or misuse the European Technical Approval.

6 The European Technical Approval is issued by the approval body in its official language. This version should correspond to the version circulated within EOTA. Translations into other languages have to be designated as such.

(1) Official Journal of the European Communities No L40, 11.2.1989, p12.
(2) Official Journal of the European Communities No L220, 30.8.1993, p1.
(3) Official Journal of the European Communities No L284, 31.10.2003, p25.
(4) Official Journal of the European Communities No L17, 20.1.1994, p34.

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of product and intended use

1.1 Definition of the product

1.1.1 Sikafloor 405 is a kit consisting of a single-component, moisture-triggered polyurethane and glass-reinforcing scrim. Specific substrates require a primer to promote adhesion of the waterproofing layer. Once installed the kit forms a homogeneous waterproofing system.

The waterproofing layer shall be covered by one of the following finishing layers:

- Quartz finish — a 3 mm thick layer which consists of a mixture of Sikafloor 406 (clear polyurethane) and Sikafloor Quartz Sand KG 7 (available as Sika Kwartskorrels KG7 in the Netherlands and Sika Granulats de Quartz KG 7 in France)
- tiling — a layer of tiles adhered to the liquid-applied waterproofing system with Sika Tile Adhesive
- Deco finish — an additional coat of Sikafloor 405 applied to the waterproofing system into which Sikafloor Colour Chips Mix (also available as Sika Verfvlokkenmengsel in the Netherlands and Sika Mélange de Paillettes in France) is evenly broadcast (approximately 0.1 kg·m^{-2}) and which is sealed with a slip control layer consisting of Sikafloor Anti-Slip Agent (also available as Sika Antislipmiddel in the Netherlands and Sika Agent Antidérapant in France) mixed on site with Sikafloor 416
- Deco + finish — an additional coat of Sikafloor 405 applied to the waterproofing system into which Sikafloor Colour Chips Mix (also available as Sika Verfvlokkenmengsel in the Netherlands and Sika Mélange de Paillettes in France) is fully broadcast (approximately 1 kg·m^{-2}). After drying and removal of loose paint flakes, the surface is sealed with a coat of Sikafloor 416
- Solid finish — an additional coat of Sikafloor 405 over which Sikafloor Quartz Sand KG 8 (available as Sika Kwartszand KG 8 in the Netherlands and Sika Sable de Quartz KG 8 in France) is fully broadcast (approximately 3 to 4 kg·m^{-2}). After drying and removal of loose quartz sand, the surface is sealed with a topcoat of Sikafloor 415
- timber boards
- pavers on bearing pads.

Approximate thicknesses of individual components are shown in Table 1.

Table 1 Approximate thicknesses of individual components

Component	Approximate thickness (µm)
Sikafloor 405 (reinforced with Sika Reemat Premium)	1400
Sikafloor Anti-Slip Layer	60
Deco finish	275
Deco + finish	275
Quartz finish	3000
Solid finish	500-1000

1.1.2 The kit is used to produce the specifications given in Table 2; the rates given are for smooth substrates.

Table 2 Coverage rates per layer of specification build up

Layer	Minimum coverage rates	
	$l \cdot m^{-2}$	$kg \cdot m^{-2}$
Basecoat (Sikafloor 405)	1.1	1.43
Reinforcement (Sika Reemat Premium)	n/a	n/a
Second coat (Sikafloor 405)	0.5	0.65
Finished thickness (mm)	1.4	1.4

1.2 Intended use

1.2.1 Sikafloor 405 is a liquid-applied waterproofing kit for use on balconies, terraces and roofs to resist the passage of water to the building's internal structure, where Essential Requirements 2 *Safety in the case of fire*, 3 *Hygiene, health and the environment* and 4 *Safety in use* of the Directive 89/106/EEC, including the aspect of durability, apply.

1.2.2 The kit has been assessed for use on substrates of:

- concrete and self-supporting cement-based substrates, painted and unpainted
- ceramic tiles, concrete tiles and natural stone tiles
- asphalt concrete in good condition
- Sika Levelling Coat, a two component, epoxy and cement-modified polymer layer for concrete and balcony tile surface preparation
- Sika Quick Hardening Screed, a fast curing mortar for balcony and terrace surface preparation (also available as Sika Sneluithardende Terrasmortel in the Netherlands or Sika Mortier Pour Terrasses à Durcissement Rapide in France).

The Manufacturer's Technical Dossier (MTD) provides information on pre-treatment for these substrates and whether or not they require a primer.

1.3 Intended working life

The provisions made in this ETA are based on an assumed working life of 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be used as a means for selecting the appropriate product in relation to the expected economically reasonable working life of the works.

2 Characteristics of product and methods of verification

2.1 Characteristics of product

2.1.1 The installed systems produced from the kit (given in Part II, clause 1.1.1) have the characteristics listed in Annex 1.

2.1.2 The characteristic values and respective tolerances for the components of the kit are stated in the MTD to this ETA.

2.1.3 Details of the chemical composition of the components of the kit and the manufacturing and quality control procedures are held by the British Board of Agrément.

2.1.4 The ETA is issued for the kit on the basis of the product composition held by the British Board of Agrément. Changes to the components of the kit or in the production process of the components which could result in the details held by the British Board of Agrément being wrong, should be notified to the British Board of Agrément before the changes are introduced. The British Board of Agrément will decide whether the changes affect the ETA, and consequently the validity of the CE marking, and whether further assessment and alterations to the ETA are required.

2.2 Methods of verification

2.2.1 Assessment of the fitness for intended use of the kit with regard to the Essential Requirements 2, 3 and 4 was carried out in accordance with the *Guideline for European Technical Approval of Liquid Applied Roof Waterproofing Kits* ETAG 005, edition March 2000, Part 1 *General* and Part 6 *Specific Stipulations for Kits Based on Polyurethane*.

2.2.2 According to the manufacturer's declaration, Sikafloor 405 does not contain any of the dangerous substances listed in the EU database.

2.2.3 Within the scope of this approval, there may be other requirements applicable to dangerous substances resulting from transposed European legislation or applicable national regulations and administrative provisions. Such requirements must be met.

3 Evaluation of Conformity and CE marking

3.1 Attestation of Conformity system

The system of Attestation of Conformity applied to this kit shall be that laid down in the CPD, Annex III, 2(ii) (referred to as System 3).

3.2 Responsibilities

3.2.1 Tasks for the manufacturer

3.2.1.1 Factory production control

The manufacturer shall set up production control at its factory and perform regular inspection and controls according to the prescribed test plan[5].

The manufacturer may only use the initial materials stated in the MTD. They shall inspect or control the raw materials on acceptance according to the prescribed test plan.

The results of factory production control are recorded and evaluated. The records include at least:

- designation of the material
- type of control or testing
- date of manufacture of the product and date of testing
- result of control or testing and, if appropriate, comparison with requirements
- signature of person responsible for factory production control.

The records shall be kept for at least five years. On request they shall be presented to the British Board of Agrément.

Details concerning extent, type and frequency of tests or inspections to be performed within the scope of the factory production control shall correspond to the prescribed test plan that is part of the MTD to this ETA.

(5) The test plan is deposited with the British Board of Agrément and contains the required information on the factory production control.

3.2.2 Tasks for approved bodies

3.2.2.1 Initial type-testing of the product

For initial type-testing, the results of the tests performed as part of the assessment for the European Technical Approval shall be used unless there are changes in the manufacturing procedure that will affect the properties. In such cases, the necessary type-testing has to be agreed between the British Board of Agrément and the approved body involved.

3.3 CE marking

The CE marking shall be affixed to each component of the kit. The CE symbol shall be accompanied by the following information:

- identification of the product
- name and address or identification mark of the manufacturer
- the last two digits of the year in which the CE marking was affixed
- number of the European Technical Approval
- statement on dangerous substances
- class of external fire performance
- reaction to fire class (Euroclass E).

4 Assumptions under which the fitness of the product for the intended use was favourably assessed

4.1 Manufacture

The components of the kit are factory made in accordance with the procedure laid down in the MTD.

4.2 Design

The fitness for the respective use for the levels of performance stated in Annex 1 results from national requirements, and previous use of the kit.

The manufacturer has stated in the MTD the quantities required to produce the specified thicknesses of the four waterproofing layers (see section 1.1).

4.3 Installation

The fitness for use of the roof waterproofing can be assumed only if the installation is carried out in accordance with the manufacturer's instructions as stated in the MTD, in particular taking into account the following points:

- installation by trained and approved personnel
- substrates must be free of contamination, visibly dry, sound and free from loose materials
- only marked components of the kit must be used
- it must be ensured that the thickness of the waterproofing is at least the nominal thickness
- installation should only be carried out during suitable weather conditions
- the substrate should be primed, if required, with the correct primer
- any points of weakness in the substrate should be reinforced prior to installation of the waterproofing layer.

The instructions for method of repair and handling of waste products shall be followed.

4.4 Responsibility of the manufacturer

It is the manufacturer's responsibility to make sure that all those who use the kit are appropriately informed of the specific conditions in sections 1, 2, 4 and 5 including the annexes to this ETA.

5 Information from the manufacturer

5.1 Information on packaging, transportation and storage

Information on packaging, transportation and storage is given in the MTD.

5.2 Information on use, maintenance and repair

Information on use, maintenance and repair is given in the MTD.

BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

Date of First issue: 23 May 2013

Simon Wroe
Head of Approvals — Materials

Claire Curtis-Thomas
Chief Executive

ANNEX 1 SIKAFLOOR 405

This annex applies to the Sikafloor 405 kit described in the main body of this ETA.

The substrates applicable to this kit are defined in the main body of this ETA.

Water vapour resistance factor (μ) — 2500.

Resistance to wind loads — >50 kPa.

The categorisation of levels of performance in accordance with ETAG 005 is given in Table 1 to this Annex.

Table 1 Levels of performance

Characteristic	Level of performance
External fire performance	$B_{ROOF}(t1)$[1]
Reaction to fire	Euroclass E
Categorisation by working life	W3
Categorisation by climatic zones	M
Categorisation by imposed loads: all substrates	P4
Categorisation by roof slope	S1 to S4
Categorisation by surface temperature: lowest highest	TL3 TH3
Statement on dangerous substances	None contained
Slipperiness [slope (°)/friction coefficient]	NPD

(1) The tests were carried out on a non-combustible calcium silicate board at roof pitches ranging from 0 – 20°.

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