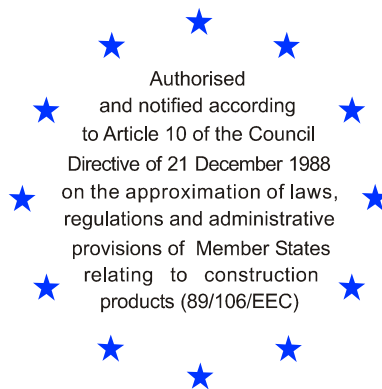


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DIBt

Mitglied der EOTA
Member of EOTA

European Technical Approval ETA-10/0350

English translation prepared by DIBt - Original version in German language

Handelsbezeichnung <i>Trade name</i>	H & S Dachabdichtung
Zulassungsinhaber <i>Holder of approval</i>	Holtmann & Stierle Chemie GmbH Grafenheider Straße 102 33729 Bielefeld DEUTSCHLAND
Zulassungsgegenstand und Verwendungszweck <i>Generic type and use of construction product</i>	Flüssig aufzubringende Dachabdichtung auf der Basis von Polyurethan <i>Liquid applied roof waterproofing on the basis of polyurethane</i>
Geltungsdauer: <i>Validity:</i>	vom <i>from</i> 17 August 2010 bis <i>to</i> 2 January 2012
Herstellwerke <i>Manufacturing plants</i>	Produktionsanlage 2

Diese Zulassung umfasst
This Approval contains

10 Seiten einschließlich 2 Anhänge
10 pages including 2 annexes



Europäische Organisation für Technische Zulassungen
European Organisation for Technical Approvals

I LEGAL BASES AND GENERAL CONDITIONS

- 1 This European technical approval is issued by Deutsches Institut für Bautechnik in accordance with:
 - Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products¹, modified by Council Directive 93/68/EEC² and Regulation (EC) N° 1882/2003 of the European Parliament and of the Council³;
 - Gesetz über das In-Verkehr-Bringen von und den freien Warenverkehr mit Bauprodukten zur Umsetzung der Richtlinie 89/106/EWG des Rates vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten über Bauprodukte und anderer Rechtsakte der Europäischen Gemeinschaften (Bauprodukten-gesetz - BauPG) vom 28. April 1998⁴, as amended by law of 31 October 2006⁵;
 - Common Procedural Rules for Requesting, Preparing and the Granting of European technical approvals set out in the Annex to Commission Decision 94/23/EC⁶;
 - Guideline for European technical approval of "Liquid applied roof waterproofing kits - Part 6: Specific stipulations for kits based on polyurethane", ETAG 005-06.
- 2 Deutsches Institut für Bautechnik is authorized 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 laid down in the annex (number) to this European technical approval.
- 4 This European technical approval may be withdrawn by Deutsches Institut für Bautechnik, in particular pursuant to information by the Commission according to 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 Deutsches Institut für Bautechnik. 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 corresponds fully to the version circulated within EOTA. Translations into other languages have to be designated as such.

1 Official Journal of the European Communities L 40, 11 February 1989, p. 12

2 Official Journal of the European Communities L 220, 30 August 1993, p. 1

3 Official Journal of the European Union L 284, 31 October 2003, p. 25

4 *Bundesgesetzblatt Teil I 1998*, p. 812

5 *Bundesgesetzblatt Teil I 2006*, p.2407, 2416

6 Official Journal of the European Communities L 17, 20 January 1994, p. 34

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of the product and intended use

1.1 Definition of product

The liquid applied roof waterproofing "H & S Dachabdichtung" is a kit which consists of liquid synthetic material of polyurethane (one-component) and polyester fleece as reinforcement. Specific substrates require a primer for an adequate adhesion of the waterproofing layer. For visual reasons the waterproofing layer can optionally be covered by a decorative finish. As assembled system these components form a homogeneous seamless roof waterproofing.

Annex 1 shows the components and the system build-up of the roof waterproofing "H & S Dachabdichtung".

The minimum layer thickness of the roof waterproofing applied amounts to 1.7 mm.

1.2 Intended use

The liquid applied roof waterproofing for the waterproofing of roof surfaces against penetration of atmospheric water is intended for uses where requirements concerning safety in case of fire, hygiene, health and the environment and safety in use as well as the durability in the sense of the essential requirements N° 2 to N° 4 of the Directive 89/106/EEC shall be satisfied.

The roof waterproofing shows certain levels of performance according to ETAG 005⁷ which facilitate the use taking account of national requirements (see chapter 2.1).

In the manufacturer's technical dossier⁸ (MTD) to this European technical approval (ETA) the manufacturer gave information concerning the substrates which the roof waterproofing is suitable for and on how these substrates shall be pre-treated. It is also stipulated in the MTD for which substrates a primer is necessary.

The verifications which are the basis of this ETA give reason for the assumption of an intended working life of the roof waterproofing of 25 years, provided that the roof waterproofing kit is subject to appropriate installation, use and maintenance. These provisions are based upon the current state of the art and the available knowledge and experience.

"Assumed intended working life" means that it is expected that, when this working life has elapsed, the real working life may be, under normal use conditions, considerably longer without major degradation affecting the essential requirements.

The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

⁷ "Guideline for European technical approval of liquid applied roof waterproofing kits, Part 1 "General" and Part 6 "Specific stipulations for kits based on polyurethane" (ETAG 005-06), publication of 2 August 2001, *Bundesanzeiger* N° 200a, ETAG N° 005, "Liquid applied roof waterproofing kits", Official Journal of the European Communities N° C 212/02, 6. September 2002

⁸ The manufacturer's technical dossier (MTD) comprises all information necessary for the production and the processing of the product as well as for the repair of the roof waterproofing made from that. It was checked by DIBt and it was found to be in accordance with the conditions stated in the approval and the characteristic values determined during the approval testing.

The part of the MTD to this ETA to be treated confidentially (inter alia the control plan for factory production control and initial type-testing) is deposited with DIBt and, as far as this is relevant to the tasks of the notified body involved in the procedure of attestation of conformity shall be handed over to the notified body.

2 Characteristics of the product and method of verification

2.1 Characteristics of the roof waterproofing

The components of the roof waterproofing show the characteristic values with respect to the permissible tolerances which are stated in the MTD to this ETA.

The chemical composition and the characteristic values of the components of the kit and the manufacturing methods are confidential and deposited with DIBt.

The performance of the reaction to fire behavior of the roof waterproofing leads to the classification in class E according to EN 13501-1.

The external fire performance of the roof waterproofing kit leads to the classification in the classes B_{ROOF} (t1) according to EN 13501-5 for supporting decks stated in Annex 2.

The verified property values of the roof waterproofing lead to levels of use categories according to ETAG 005. They are stated in Annex 1.

An evaluation oriented at the intended use of the roof waterproofing can be carried out with them by the user.

2.2 Methods of verification

Assessment of the fitness of the roof waterproofing for the intended use with regard to the essential requirements N° 2 to N° 4 was performed following the "Guideline for European technical approval of liquid applied roof waterproofing kits", Part 1 "General" and Part 6 "Specific stipulations for kits based on polyurethane" (ETAG 005-06).

According to the manufacturer's declaration the roof waterproofing taking account of the EU database⁹ does not contain any dangerous substances.

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.

There may be other requirements applicable to the products resulting from other applicable national regulations and administrative provisions.

These requirements need also to be complied with.

3 Attestation of conformity of the product and CE marking

3.1 System of attestation of conformity

The European Commission according to her decision on the procedure of attestation of conformity 98/599/EC¹⁰ of October 1998 (Official Journal of the European Communities N°L 287, 24.10.1998) has laid down for this type of material system 3 for the procedure of attestation of conformity (AoC) (Annex III, clause 2(ii) second possibility of Directive 89/106/EEC) for liquid applied roof waterproofing kits.

⁹ Notes are stated in Guidance Paper H: A harmonized approach relating to Dangerous substances under the construction product directive, Brussels, 18 February 2000

¹⁰ Official Journal of the European Communities N°L 287 of October 1998

The system 3 of attestation of conformity is defined as follows:

- a) Tasks for the manufacturer:
 - (1) factory production control,
- b) Tasks for the notified body:
 - (2) initial type-testing of the product.

In addition, according to the Decision 2001/596/EC of the European Commission¹¹ the system 3 of attestation of conformity applies for this type of product with regard to reaction to fire.

3.2 Responsibility

3.2.1 Tasks for the manufacturer

3.2.1.1 Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall insure that the product is in conformity with this ETA.

The factory production control shall be in accordance with the appropriate part of control plan¹² which is confidential part of the MTD. The control plan is laid down in the context of the factory production control system operated by the manufacturer and deposited with DIBt.

The manufacturer may only use initial materials according to the MTD. He shall inspect or control the initial materials on acceptance according to the control plan.

The factory production control follows the identifying properties of the components given in ETAG 005 Part 6 and as specified in the MTD.

The results of the factory production control shall be recorded and evaluated. The records shall include at least the following information:

- Name of the product and of the initial materials,
- type of inspection or control,
- date of manufacture of the product, batch N° if needed, and date of inspection or control of the product or of the initial materials,
- result of inspections or controls and, as far as applicable, comparison with the requirements,
- signature of the person responsible for the factory production control.

The records shall be kept for at least five years. On request they shall be presented to DIBt.

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

¹¹ Official Journal of the European Communities N°L 209/33 of August 2001

¹² The "control plan" is a confidential part of the MTD to this ETA and deposited with DIBt. It contains the required information on the factory production control and on the initial type-testing. As far as this is relevant to the tasks of the notified body involved in the procedure of attestation of conformity the control plan will be handed over to the notified body. See section 3.2.2.

3.2.1.2 Other tasks for the manufacturer

The manufacturer shall, on the basis of a contract, involve a body which is notified for the tasks referred to in section 3.1 in the field of the product in order to undertake the actions laid down in section 3.2.2. For this purpose, the "control plan" referred to in section 3.2.2 shall be handed over by the manufacturer to the notified body involved.

The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of this ETA.

3.2.2 Tasks for the notified body

3.2.2.1 Initial type-testing of the product

The initial type-testing refers to the product properties stated in the control plan to this ETA. They follow the product properties referred to in ETAG 005 Part 6.

If the verifications underlying this ETA have been furnished on samples from the current production, these will replace the initial type-testing.

Otherwise the necessary initial type-testing shall be carried out according to the provisions of the control plan and observance of the required property values shall be ascertained by the notified body.

After changing the production process or starting the production in another manufacturing plant the initial type-testing shall be repeated.

3.3 CE marking

The CE marking¹³ shall be affixed on the packaging of the kit of the roof waterproofing "H & S Dachabdichtung" or its accompanying documents.

The letters "CE" shall be accompanied by the following additional information:

- Name and address or identifying mark of the manufacturer and of the factory,
- the last two digits of the year in which the CE marking was affixed,
- number of the European technical approval,
- number of the European technical approval guideline
- short definition of the levels of performance according to Annex 1.

The components shall be marked as belonging to the kit "H & S Dachabdichtung".

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

4.1 Manufacture

The components of the kit of the roof waterproofing are factory-made according to the procedure laid down in the MTD.

The ETA is issued for the kit on the basis of the product composition deposited with DIBt. Changes to the components of the kit or in the production process of the components, which could result in the production process and/or the properties of the product deposited being incorrect should be notified to DIBt before the changes are introduced. DIBt will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment/alterations to the ETA shall be necessary.

¹³ Notes on the CE marking are stated in Guidance Paper D "CE marking under the Construction Products Directive", Brussels, 1 August 2002.

4.2 Design and dimensioning

The fitness for the respective use for the levels of use categories stated in Annex 1 results, if need be, taking account of national requirements.

The supplementing statements of the manufacturer stated in the MTD for design and dimensioning of the roof waterproofing shall be considered.

In the MTD the manufacturer gave information on the quantities consumed and the processing, which shall lead to a thickness of the roof waterproofing of at least 1.7 mm.

4.3 Installation

The fitness for use of the roof waterproofing can be assumed only, if the installation is carried out according to the installation instructions stated in the MTD by the manufacturer in particular taking account of the following points:

- installation by appropriately trained personnel,
- installation of only those components which are a marked components of the kit,
- installation with the required tools and adjuvants,
- precautions during processing,
- inspecting the roof surface for cleanliness and correct preparation, if need be, applying a primer before applying the roof waterproofing,
- inspecting compliance with suitable weather and curing conditions,
- finding out whether to the given ambient temperature the application with the adjustment for summer or winter is to be accomplished,
- ensuring a thickness of the waterproofing of at least 1.7 mm by processing appropriate minimum quantities of material,
- inspections during installation and of the finished roof waterproofing and documentation of the results.

The information as to the

- method of repair on site,
- handling of waste products

shall be observed.

4.4 Manufacturer's responsibilities

It is the manufacturer's responsibility to make sure that all those who utilize the kit will be appropriately informed about the specific conditions according to sections 1, 2, 4, and 5 including the annexes to this ETA and the not confidential parts of the MTD deposited to this ETA.

5 Information by the manufacturer

5.1 Information on packaging, transportation and storage

Information on:

- Packaging
- transportation and
- storage

are given in the MTD.

5.2 Information on use, maintenance and repair

Information on:

- Use
- maintenance
- repair

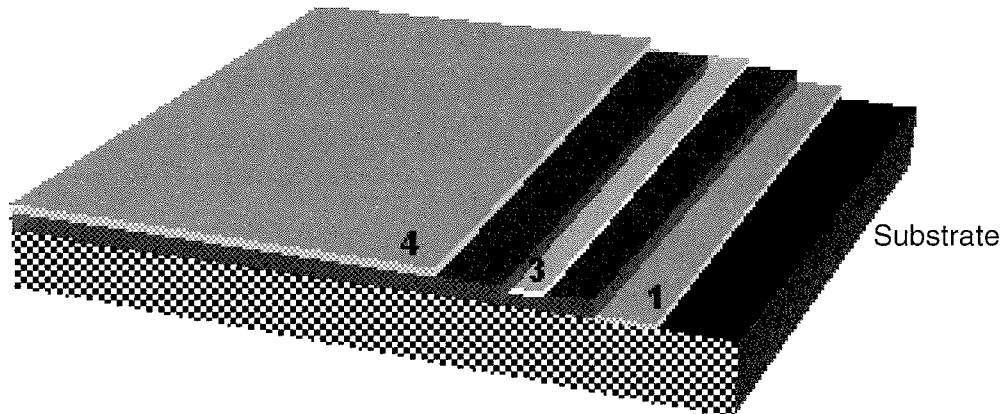
are given in the MTD.

Uwe Bender
Abteilungsleiter
Berlin, 17 August 2010

beglaubigt:
Hemme

DEUTSCHES INSTITUT FÜR BAUTECHNIK

System built-up of the roofwaterproofing "H & S Dachabdichtung"



- | | |
|------------|---|
| Components | 1 Primer (where required) |
| | 2 Liquid synthetic material |
| | 3 Polyester fleece layer |
| | 4 Topping (optional: decorative finish) |

Applicable to the roof waterproofing
 "H & S Dachabdichtung":

Minimum layer thickness		1,7 mm
Water vapour diffusion resistance factor μ		≈ 2300
Resistance to wind loads		≥ 50 kPa for substrates with tear resistance
External fire performance	EN 13501-5	B_{ROOF} (t1) for supporting decks stated in Annex 2
Reaction to fire	EN 13501-1	class E
Statement on dangerous substances		does not contain any
Resistance to root penetration		root resistant
Resistance to slipperiness		NPD

Levels of use categories according to ETAG 005 with relation to:

Working life:	W3
Climatic zones:	M and S
Imposed loads:	P1 to P4 (compressible substrate, e.g. mineral wool plate and non-compressible substrate, e.g. concrete/steel)
Roof slope:	S1 to S4
Lowest surface temperature:	TL4
Highest surface temperature:	TH4

Information for users:

As an alternative there are test certificates by the *Berufsgenossenschaftliches Institut für Arbeitsschutz*, ('*Berufsgenossenschaftliches Institute for Occupational Safety and Health*'), Sankt Augustin, for the verification of slipperiness for various scatterings.

Holtmann & Stierle Chemie GmbH

Grafenheider Str. 102
 33729 Bielefeld
 Germany

**Roof waterproofing
 H & S Dachabdichtung**

Liquid applied roof waterproofing on the basis of polyurethane

Annex 1

to European technical approval N° ETA-10/0350 dated 17 August 2010

DEUTSCHES INSTITUT FÜR BAUTECHNIK

Classification of the external fire performance according EN 13501-5 for the following supporting decks for the roof waterproofing

"H & S Dachabdichtung"

Class **B_{ROOF} (t₁)**

H & S Dachabdichtung" with fleece layer as reinforcement

The classification is valid for the following supporting decks:

- all roof pitches
- any non-combustible continuous deck with a minimum thickness of 10 mm

- roof pitches < 20°
- any wooden continuous deck with a minimum thickness of 16 mm and with gaps not exceeding 0.5 mm

Any other roof systems for which classification documents for B_{roof} (t₁) according to EN 13501-5 are available.

Holtmann & Stierle Chemie GmbH

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33729 Bielefeld

Roof waterproofing

H & S Dachabdichtung

Liquid applied roof
waterproofing on the basis of
polyurethane

Annex 2

to European technical
approval N° ETA-10/0350
dated 17 August 2010