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

Deutsches Institut für Bautechnik

DIBt

Mitglied der EOTA
Member of EOTA

European Technical Approval ETA-06/0257

English translation prepared by DIBt - Original version in German language

Handelsbezeichnung *Trade name*		RESITRIX MB
Zulassungsinhaber *Holder of approval*		Carlisle Construction Materials GmbH Schellerdamm 18 21079 Hamburg DEUTSCHLAND
Zulassungsgegenstand und Verwendungszweck *Generic type and use of construction product*		Verbundabdichtungssystem auf EPDM-Basis für die Dach- und Bauwerksabdichtung *Composite waterproofing kit on the basis of EPDM for the waterproofing of roofs and construction works*
Geltungsdauer: *Validity:*	vom *from* bis *to*	16 January 2013 8 December 2016
Herstellwerk *Manufacturing plant*		Carlisle Construction Materials GmbH Eisenacher Landstraße 70 99880 Waltershausen DEUTSCHLAND

Diese Zulassung umfasst *This Approval contains*	12 Seiten einschließlich 3 Anhänge *12 pages including 3 annexes*
Diese Zulassung ersetzt *This Approval replaces*	ETA-06/0257 mit Geltungsdauer vom 08.12.2011 bis 08.12.2016 *ETA-06/0257 with validity from 08.12.2011 to 08.12.2016*

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 products[1], modified by Council Directive 93/68/EEC[2] and Regulation (EC) N° 1882/2003 of the European Parliament and of the Council[3];
- *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 (Bauproduktengesetz - BauPG) vom 28. April 1998[4], as amended by Article 2 of the law of 8 November 2011[5];*
- Common Procedural Rules for Requesting, Preparing and the Granting of European technical approvals set out in the Annex to Commission Decision 94/23/EC[6].

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 indicated on page 1 of 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.

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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 2011*, p. 2178
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 product and intended use

1.1 Definition of the construction product

The composite waterproofing "RESITRIX MB" is a kit which consists of the components composite waterproofing sheet "RESITRIX MB" and contact adhesive "RESISTIT-Kleber G 2000".

Annex 1 shows the system build-up and classifications and in Annex 2 the characteristic measures of the composite waterproofing sheet and the assembled system are stated.

1.1.1 Composite waterproofing sheet

The composite waterproofing sheet "RESITRIX MB" consists of an elastomer layer (EPDM) with glass fibre mat insert enveloped by two layers of thermoplastic elastomer (TPE) and a lower surface layer of polymer-modified bitumen. The lower surface of the bitumen layer is covered by a thin separating layer (PE). The sheets have a textured upper surface. "RESITRIX MB" is applicated with hot mixed bitumen or polymeric bitumen to different substrates. The joints of the composite waterproofing sheet can be welded with hot air.

The thickness of the composite waterproofing sheet is ≥ 3,0 mm, the width is about 1000 mm and the mass is about 3,5 kg/m². The joint overlap is greater than 50 mm. The composite waterproofing sheet is delivered in rolls.

1.1.2 Contact adhesive

The contact adhesive is based on a solvent-containing, medium viscous synthetic rubber and can be used for sticking the composite sheets at their joints and is used at connections, corners, up stands etc.

1.2 Intended use

The composite waterproofing system is intended for single layer waterproofing to create:

a) a roof waterproofing for roofs not accessible for vehicles or

b) a waterproofing system for damp proofing including basement tanking of construction works.

The composite waterproofing system can be applicated at vertical, horizontal or sloped substrates against penetration of water.

The composite waterproofing system shows certain classifications according to Annex 1 and Annex 2 which facilitate the use taking account of national requirements (see chapter 2.1).

In the manufacturer's technical dossier[7] (MTD) to this European technical approval (ETA) the manufacturer gives information concerning the substrates which the composite waterproofing is suitable for and how these substrates shall be pretreated.

[7] The manufacturer's technical dossier (MTD) comprises all information necessary for the production and the installation of the product as well as for the repair of the roof waterproofing made from that and it is deposited with DIBt. 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 provisions made in this ETA are based on an assumed working life[8] of the composite waterproofing of 25 years.

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

2 Characteristics of product and methods of verification

The components of the composite waterproofing system show the characteristic values with respect to the permissible tolerances which are stated in Annex 2 and 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 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 performance of the reaction to fire behavior of the waterproofing system leads to the classification in class E according to EN 13501-1[9].

The classifications of the external fire performance of the composite waterproofing system for the waterproofing of roofs according to EN 13501-5[10] are B_{ROOF} (t1) and B_{ROOF} (t2) for substrates stated in Annex 3.

An evaluation oriented at the intended use of the composite waterproofing can be carried out with them by the user taking account of national requirements.

According to the manufacturer's declaration the composite waterproofing system taking account of the EU database[11] 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 laws, regulations and administrative provisions.

There may be other requirements applicable to the products resulting from other applicable national laws, regulations and administrative provisions and transposed European legislation.

These requirements need also to be complied with, when and where they apply.

8 "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.

9 EN 13501-1:2007 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

10 EN 13501-5:2005 Fire classification of construction products and building elements - Part 5: Classification using data from external fire exposure to roofs tests

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

3 Evaluation and attestation of conformity and CE marking

3.1 System of attestation of conformity

According to the communication of the European Commission[12] system 2+ for the procedure of attestation of conformity (Annex III, clause 2(ii) first possibility of Directive 89/106/EEC) applies as laid down in the decision 1999/90/EC[13].

According to the Decision 98/599/EC10[14] of the European Commission system 3 of attestation of conformity (Annex III, clause 2(ii) second possibility of Directive 89/106/EEC) applies with regard to external fire performance of roofs (class B_{ROOF} (ti)).

In addition, according to the Decision 2001/596/EC[14] of the European Commission the system 3 of attestation of conformity (Annex III, clause 2(ii) first possibility of Directive 89/106/EEC) applies for this type of product with regard to reaction to fire (class E).

The system 2+ of attestation of conformity is defined as follows:

System 2+: Declaration of conformity of the product by the manufacturer on the basis of:

a) Tasks for the manufacturer:
   (1) initial type–testing of the product
   (2) factory production control
   (3) testing of samples taken at the factory in accordance with a prescribed test plan
b) Tasks for the notified body:
   (4) certification of factory production control on the basis of:
      – initial inspection of factory and of factory production control
      – continuous surveillance, assessment and approval of factory production control

System 3: Declaration of conformity of the product by the manufacturer on the basis of:

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

3.2 Responsibilities

3.2.1 Task of 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 the control plan[15].

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.

12 Letter of the European Commission of 15 October 2004 to EOTA

13 Official Journal of the European Communities L 29/38 of 25 January 1999

14 Official Journal of the European Communities N°L 209/33 of 08 January 2001

15 The control plan is a confidential part of the MTD to this ETA. It contains the required information on the factory production control, on the initial type-testing and the initial inspection of the factory and the continuous surveillance, assessment and approval of the factory production control. 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.

The factory production control follows the identifying properties of the components. They are specified in the MTD.

The results of the factory production control shall be recorded and evaluated in accordance with the provisions of the control plan.

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.

3.2.1.2 Initial type-testing of the product

The initial type-testing refers to the product properties stated in the appropriate part of the control plan to this ETA.

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.

3.2.1.3 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/bodies involved.

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

3.2.2 Task of the notified body

3.2.2.1 Initial type-testing with regard to reaction to fire and external fire performance

The appropriate part of the control plan states the information on the reaction to fire properties which have to be tested on initial type-testing by the notified body. In case of need it will be handed over for initial type-testing of the product to the notified body recognized for initial type-testing.

If the verifications underlying the 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 required in the ETA 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.

3.2.2.2 Initial inspection of factory and factory production control

The appropriate part of the control plan states the information on the properties which have to be controlled by the notified body involved for initial inspection of factory and factory production control. The notified body has to control the devices and equipments and the documentation of the factory production control of the manufacturer when starting the production.

The notified body shall retain the essential points of its actions referred to above and state the results obtained and conclusions drawn in a written report.

The notified certification body involved by the manufacturer shall issue an EC certificate of conformity of the factory production control stating the conformity with the provisions of this ETA.

After changing the production process or starting the production in another manufacturing plant the initial inspection of factory and factory production control shall be repeated. The notified body shall issue a new EC certificate of conformity of the factory control stating the conformity with the provisions of this ETA.

3.2.2.3 Continuous surveillance, judgment and assessment of factory production control

The appropriate part of the control plan states the information on the product properties which have to be checked by the notified body involved. The frequency of this tasks should be twice a year.

The notified body shall retain the essential points of its actions referred to above and state the results obtained and conclusions drawn in a written report.

In cases where the provisions of this ETA and its control plan are no longer fulfilled the certification body involved shall withdraw the certification of conformity and inform DIBt without delay.

3.3 CE marking

The CE marking[16] shall be affixed on the packaging of the kit of the composite waterproofing "RESITRIX MB" or its accompanying documents.

The letters "CE" shall be followed by the identification number of the notified body, and be accompanied by the following additional information:

- name and address or identifying mark of the manufacturer,
- last two digits of the year in which the CE marking was affixed,
- number of the EC certificate for the factory production control,
- number of the European technical approval,
- intended use, classification and characteristics of the product.

The components shall be marked as belonging to the composite waterproofing kit "RESITRIX MB".

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

CE marking and accompanying information:

CE *nnnn*	**Letters "CE"** Identification number of notified body (system 2+)
Carlisle Construction Materials GmbH Schellerdamm 18 21079 Hamburg Germany	Name and address of the producer
06	two last digits of year of affixing CE marking
nnnn-CPD-*xxxx*	number of the EC certificate for the FPC
ETA-06/0257	ETA number
Roof waterproofing/Damp proofing including basement tanking	intended use
classification of the system and declared values of the product and the system see Annex 1 and 2 of ETA-06/0257	classification and characteristics of the product

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

4.1 Manufacturing

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

The ETA is issued for the kit on the basis of agreed data/information, deposited with DIBt, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to DIBt before the changes are introduced. DIBt will decide whether or not such changes affect the approval and consequently the validity of the CE marking on the basis of the approval and if so whether further assessment or alterations to the approval shall be necessary.

4.2 Design and dimensioning

The fitness for the respective use of the composite waterproofing results from the characteristic values stated in Annex 1 and Annex 2, if need be, taking account of national requirements for creating a waterproofing system for:

a) roof waterproofing for roofs not accessible for vehicles or,

b) waterproofing system for damp proofing including basement tanking of construction works.

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

4.3 Installation

The fitness for use of the composite 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 marked components of the kit,
- installation with the required tools and adjuvants,
- precautions during installation,
- inspecting the substrate surface for cleanliness and correct preparation,
- inspecting compliance with suitable weather and curing conditions,
- inspections during installation and of the finished composite 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 Indications to the manufacturer

5.1 Packaging, transport and storage

Information on:

- packaging,
- transport and
- storage

are given in the MTD.

5.2 Use, maintenance and repair

Information on:

- use,
- maintenance,
- repair

are given in the MTD.

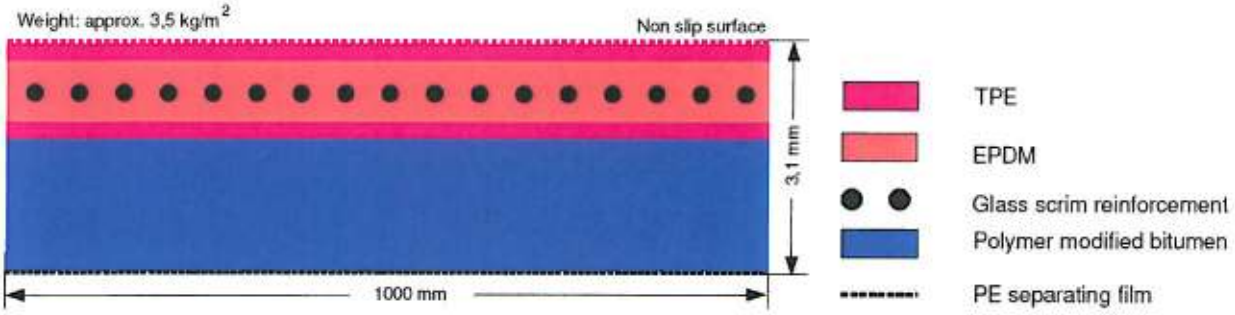
Christian Herold
p. p. Head of Department

beglaubigt:
Hemme

Deutsches Institut für Bautechnik DIBt

Build-up of the composite waterproofing sheet "RESITRIX MB"

RESITRIX® MB



Bitumen – compatible, heat weld able, EPDM synthetic rubber membrane

1. Classification of the assembled waterproofing system for roofs and construction works "RESITRIX MB":

Reaction to fire	EN 13501-1	class E
Resistance to spreading fire and radiant heat	EN 13501-5	classes B_{ROOF} (t1), B_{Roof} (t2) on substrates stated in Annex 3
Statement on dangerous substances		does not contain any
Assumed intended working life:		25 years

RESITRIX MB Carlisle Construction Materials GmbH	Annex 1
Built-up	

Deutsches Institut für Bautechnik DIBt

2. Characteristics of the composite waterproofing sheet "RESITRIX MB"

Characteristics	Technical document	declared values by the manufacturer
Thickness:	EN 1849-2	3,0 mm – 3,3 mm
Width:	EN 1848-2	1000 mm -0,5 % till +1 %
Length:	EN 1848-2	10,0 m ± 0,8 %
Straightness:	EN 1848-2	≤ 50 mm per 10 m
Flatness:	EN 1848-2	≤ 10 mm
Mass per unit area:	EN 1849-2	3,15 kg/m² – 3,85 kg/m²
Maximum tensile force:	EN 12311-2	500 – 850 (N/50 mm)
Elongation at maximum load:	EN 12311-2	2 – 5 %
Flow resistance at high temperature:	EN 1110	at 100 °C, < 2 mm
Flexibility at low temperatures:	EN 1109	≤ -30 °C
Dimensional stability:	EN 1107-2	≤ 0,5 %
Water tightness of the sheet and the joints:	EN 1928 method B	≥ 0,06 MPa, 72 h
Water vapour diffusion resistance index μ	EN 1931	> 58000

3. Characteristics of the assembled waterproofing system

Characteristics	Technical document	declared values by the manufacturer
Resistance to impact for all substrates:	EN 12691	resists smallest diameter of the stab (10 mm) for all substrates
Resistance to static loading:	EN 12730 method B	20 kg (less compressible substrate)
	EN 12730 method A	10 kg (most compressible substrate)
Resistance to delamination and wind loads:	EN 1607	≥ 50 kPa
Resistance to root penetration:	prEN 13498	npd
Peel resistance of joints:	EN 12316	≥ 80 N/50 mm
Shear resistance of joints:	EN 12317	≥ 200 N/50 mm
Durability:	The resistances of the mechanical characteristics against ageing	
	EN 12316-2	
	EN 12317-2	caused by hot water (60 °C, 7 days)
	EN 1296	caused by temperature,
	EN 1297	caused by UV (> 1000 h, grade 0)
	EN 1844	caused by ozon
	are proved.	

RESITRIX MB Carlisle Construction Materials GmbH	Annex 2
Characteristics of the composite waterproofing sheet and the assembled system	

Deutsches Institut für Bautechnik DIBt

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

Class B_{ROOF} (t1)

The classification is valid for the following supporting decks:

roof pitches < 20°

- any wooden continuous deck
- any non-combustible continuous deck with gaps not exceeding 5 mm
- with vapor lock aluminum compound foil with a thickness of 0,4 mm and a Mass per unit area of 300 g/m²
- thermal insulation PUR/PIR acc. to EN 13165, class E acc. to EN 13501-1, CS 10 (100), d = 100 mm

Class B_{ROOF} (t2)

The classification is valid for the following supporting decks:

All pitches

- thermal insulation EPS acc. to EN 13163, class E acc. to EN 13501-1, CS 10 (150), d = 100 mm, density ≥ 17,3 kg/m³
- thermal insulation MW "Hardrock II" acc. to EN 13162, class A1 acc. to EN 13501-1, CS 10 (70), d = 100 mm, density ≥ 145 kg/m³

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

RESITRIX MB Carlisle Construction Materials GmbH	Annex 3
Reaction to external fire	