

## European Technical Approval ETA-09/0146

English translation prepared by DIBt - Original version in German language

Handelsbezeichnung <i>Trade name</i>	Abdichtungssystem "Schlüter-KERDI" <i>Sealingsystem "Schlüter-KERDI"</i>
Zulassungsinhaber <i>Holder of approval</i>	Schlüter-Systems KG 58640 Iserlohn
Zulassungsgegenstand und Verwendungszweck  <i>Generic type and use of construction product</i>	Bausatz aus einer Polymer-Abdichtungsbahn und weiteren Komponenten zur Herstellung eines Abdichtungssystems gegen Wasser auf Wänden und Böden im Innen- und Außenbereich  <i>Kit of waterproofing polymeric membrane and other components for creating a waterproof system against action of water on walls and floors of buildings under indoor and outdoor conditions</i>
Geltungsdauer: <i>Validity:</i>	vom <i>from</i> bis <i>to</i> 17 February 2011 23 July 2014
Herstellwerke <i>Manufacturing plants</i>	Schlüter-Systems KG, Produktionsstätte 58313 Schlüter-Systems KG, Produktionsstätte 58453

Diese Zulassung umfasst  
*This Approval contains*

11 Seiten einschließlich 2 Anhänge  
*11 pages including 2 annexes*

Diese Zulassung ersetzt  
*This Approval replaces*

ETA-09/0146 mit Geltungsdauer vom 24.07.2009 bis 23.07.2014  
*ETA-09/0146 with validity from 24.07.2009 to 23.07.2014*

## 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<sup>1</sup>, modified by Council Directive 93/68/EEC<sup>2</sup> and Regulation (EC) N° 1882/2003 of the European Parliament and of the Council<sup>3</sup>;
  - 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<sup>4</sup>, as amended by law of 31 October 2006<sup>5</sup>;
  - Common Procedural Rules for Requesting, Preparing and the Granting of European technical approvals set out in the Annex to Commission Decision 94/23/EC<sup>6</sup>.
- 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.

<sup>1</sup> Official Journal of the European Communities L 40, 11 February 1989, p. 12  
<sup>2</sup> Official Journal of the European Communities L 220, 30 August 1993, p. 1  
<sup>3</sup> Official Journal of the European Union L 284, 31 October 2003, p. 25  
<sup>4</sup> *Bundesgesetzblatt Teil I* 1998, p. 812  
<sup>5</sup> *Bundesgesetzblatt Teil I* 2006, p. 2407, 2416  
<sup>6</sup> 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 watertight system "Schlüter-KERDI" is a kit which consists of the components:

- waterproofing membrane "Schlüter-KERDI" on the basis of polyethylene with polyester covering fleece on both sides,  $d = 0,5 \text{ mm}$   
or waterproofing membrane "Schlüter-KERDI-DS" on the basis of polyethylene with polyester covering fleece on both sides,  $d = 0,6 \text{ mm}$
- adhesive "ARDEX DITRA FBM" on the basis of cement mortar for gluing the membrane to the substrate and the wearing surface to the membrane
- sealing tape "Schlüter-KERDI-KEBA" on the basis of fleece covered polyethylene for sealing joints,
- collar "Schlüter-KERDI-KM" on the basis of fleece covered polyethylene for sealing of pipe penetrations
- corner strip "Schlüter-KERDI-KERECK" on the basis of fleece covered polyethylene membrane for sealing in and out going corners
- assembly glue "Schlüter-KERDI-COLL" on the basis of two-component acrylic dispersion for gluing "Schlüter-KERDI-KEBA", "Schlüter-KERDI-KM" and "Schlüter-KERDI-KERECK" to the polyethylene membrane

The kit shall be used under a wearing surface, e.g. tiles, bonded with adhesive "ARDEX KERDI FBM" on the basis of cement mortar. The adhesive is CE-marked according to EN 12004<sup>7</sup>.

The wearing surfaces and the jointing material are not part of the kit, but are considered during the assessment of the intended use of the product.

Annex 1 show the system build-up for wet areas and Annex 2 shows the components for sealing details.

#### 1.2 Intended use

The intended use of the watertight system under a wearing surface is to create a floor and wall watertight covering for indoor and outdoor wet areas.

The collars and sleeves belonging to the kit are used for sealing pipe penetrations and floor gullies and the sealing tapes and preformed sleeves are used for sealing joints, corners and edges.

The following uses are intended:

(A)

- floor and/or wall surfaces with only occasional direct exposure to water, e.g. at a good distance from shower or bathtub.
- floor and/or wall in shower areas or around bathtubs used for a few showers daily, e.g. in ordinary dwellings, multifamily houses and hotels.

- floor and/or wall surfaces with exposure to water more frequent or of longer duration than normally anticipated in dwellings, e.g. public wet rooms, schools and sport facilities and lower galleries of swimming pools.

(B)

- floor and/or wall surfaces in swimmingpools against pressing water from inside up to a height of water or 10 m

The watertight system in combination with covering tiles may only be used on sustainable, flexible or rigid substrates.

The product should be used in connection with the following types of gullies:

Stainless steel or plastics – type PE or PP – with flange for attaching of collar/membrane or with clamping ring and collar.

The gullies are not part of the kit. It is up to the responsibility of the user to use suitable products of the given types.

The verifications which are the basis of this ETA give reason for the assumption of an intended working<sup>8</sup> life of 25 years, provided that the watertight covering kit is subject to appropriate use and maintenance. These provisions are based upon the current state of the art and the available knowledge and experience.

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.

## 2 Characteristics of product and methods of verification

The components of the product show the characteristic values with respect to the permissible tolerances which are stated in the manufacturer's technical dossier<sup>9</sup> (MTD) to this ETA.

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

The permissible tolerance does not affect the characteristic values of the products and the assembled system negatively.

Requirements concerning safety in case of fire, hygiene, health and the environment and safety in use as well as durability in the sense of the essential requirements N° 2 to N° 3 of the Council Directive 89/106/EEC shall be satisfied.

The verified property values of the product lead to characteristics and categories. They are stated in Annex 1. An evaluation oriented at the intended use can be carried out with them by the user with respect to national regulations of the member states.

The reaction to fire behaviour of the waterproofing system is classified in class E according to EN 13501-1<sup>10</sup>.

According to the manufacturer's declaration the composite waterproofing system taking account of the EU database<sup>11</sup> 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.

<sup>8</sup> "Assumed intended working life" means that it is expected that, when this working life has elapsed, the real working life may be, in normal use conditions, considerably longer without major degradation affecting the Essential Requirements.

<sup>9</sup> 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.

<sup>10</sup> EN 13501-1:2007 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

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

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.

### 3 Evaluation and attestation of conformity and CE marking

#### 3.1 System of attestation of conformity

According to the decision 2003/655/EC<sup>12</sup> of the European Commission<sup>13</sup> system 2+ for the procedure of the attestation of conformity (Annex III, clause 2(ii) first possibility of Directive 89/106/EC) applies.

In addition, according to the Decision 2001/596/EC<sup>14</sup> of the European Commission system 3 of the attestation of conformity (Annex III, clause 2(ii) second possibility of Directive 89/106/EC) applies with regard to reaction to fire.

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 for reaction to fire 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

For the component adhesive is provided that the attestation of conformity process for the adhesive according to EN 12004 is done on basis of this standard. The required additional attestation of conformity is related to the kit and shall be done by the Declaration of conformity by the manufacturer and the CE marking of the kit according to clause 3.3 respectively 3.2.1.3.

##### 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.

<sup>12</sup> Official Journal of the European Communities L 231/12 of 17 September 2003

<sup>13</sup> Letter of the European Commission of 16 October 2004 to EOTA

<sup>14</sup> Official Journal of the European Communities L 209/33 of 2 August 2001

The factory production control shall be in accordance with the appropriate part of the control plan<sup>15</sup> 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 as 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 manufacturer.

After changing the production process 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 (b) 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 product is in conformity with the provisions of this ETA and shall mark the product with the CE mark according to clause 3.3. The Declaration of conformity shall be accompanied by the EC certificate of conformity of the factory production control certificate.

<sup>15</sup>

The control plan is a confidential part of the MTD. It contains the required information on the factory production control and on the initial type-testing. The MTD is only handed over to the notified body involved in the procedure of attestation of conformity (see 3.2.2).



### 3.2.2 Task of the notified body

#### 3.2.2.1 Initial type-testing with regard to reaction to fire

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 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 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 shall be twice a year but if necessary i.e. if the results of the inspection is unsatisfactory it is required to be done more often.

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<sup>16</sup> shall be affixed on the packaging of the kit of the watertight membrane "Schlüter-KERDI" 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,
- number of EOTA-product area code.

<sup>16</sup> Notes on the CE marking are stated in Guidance Paper D "CE marking under the Construction Products Directive", Brussels, 1 August 2002

The components shall be specified as belonging to the composite waterproofing kit "Schlüter-KERDI".

CE marking and accompanying information:

	<b>Letters "CE"</b>
<i>nnnn</i>	Identification number of notified body (system 2+)
Schlüter-Systems KG Schmölestraße 7 58640 Iserlohn Germany	Name and address of the producer
<i>09</i> <i>nnnn-CPD-xxxx</i>	two last digits of year of affixing CE marking number of the EC certificate for the FPC
ETA-09/0146	ETA number
"Schlüter-KERDI" Watertight system in combination with covering tiles for wet areas under outdoor and indoor conditions Declared values of the product and system characteristics see Annex 1 and Annex 2 of ETA-09/0146	intended use
	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 watertight membrane 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.

**4.2 Design and dimensioning**

The fitness for the respective use of the watertight system membrane results from the characteristic values and categories under consideration of the system build up given in Annex 1.

The supplementing statements of the manufacturer stated in the MTD for design and application of the watertight system for creating a watertight covering in combination with covering tiles under wearing surface for floors and walls in outdoor and indoor wet areas e.g. in shower areas, lower galleries of swimming pools or wet rooms, shall be considered.



#### 4.3 Installation

The fitness for use of the watertight membrane 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 specified as components of the kit,
- installation with the required tools and adjuvants,
- precautions during installation,
- inspecting the substrate surface for cleanliness and correct treatment,
- inspecting compliance with suitable weather and curing conditions,
- inspections during installation and of the finished watertight membrane 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:

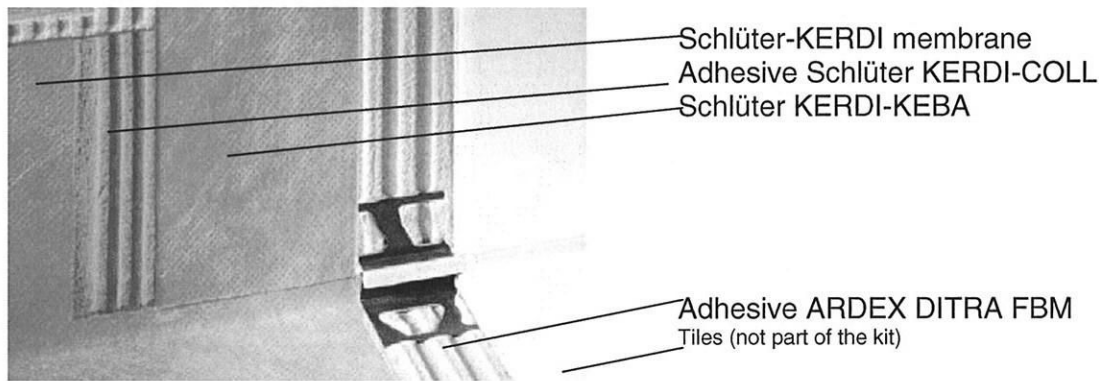
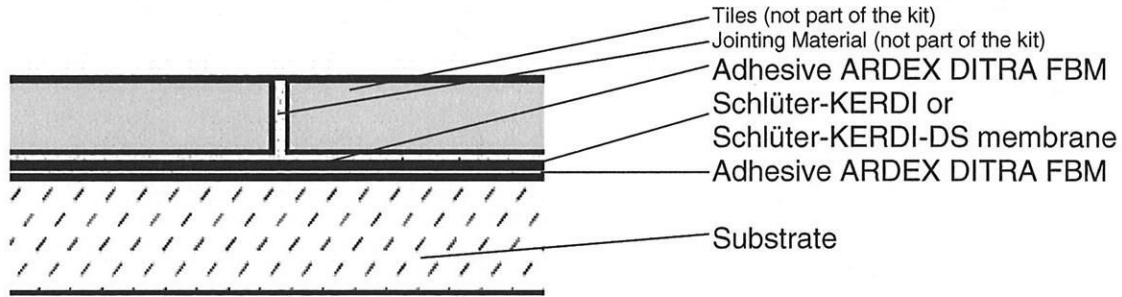
- use,
- maintenance,
- repair

are given in the MTD.

Uwe Bender  
Head of Department

*beglaubigt:*  
Hemme

English translation prepared by DIBt



**Characteristic**

Water tightness

Water vapour diffusion resistance factor: Schlüter-KERDI

Schlüter-KERDI-DS

Thickness of the waterproofing sheet material

Width

Mass per Unit

Assumed intended working life

Reaction to fire EN 13501-1

Statement on dangerous substances

Crack bridging ability

Bond strength

Joint bridging ability

Water tightness at sealing and around penetrations

Water tightness at sealing under high pressure

Freeze / Thaw resistance

Resistance to temperature

Resistance to water

Resistance to alkalinity

Resistance to chlorine

**Intended Use**

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A)

(B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

(A), (B)

**Result<sup>1)</sup>**

watertight

$s_d = 5,15 \text{ m}$

$s_d > 100 \text{ m}$

0,5 mm

125 mm

200 g/m<sup>2</sup>

25 years

class E

does not contain any

1,5 mm

≥ 0,2 MPa

watertight

watertight

watertight

proved

proved

proved

proved

proved

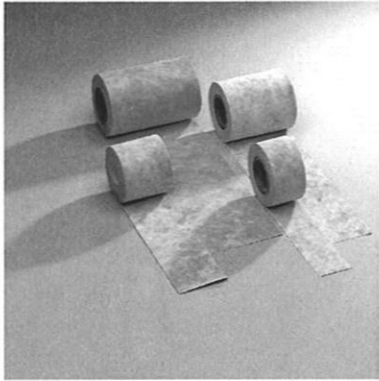
<sup>1)</sup> to be evaluated taking into account national requirements

Abdichtungssystem "Schlüter-KERDI", Schlüter-System KG

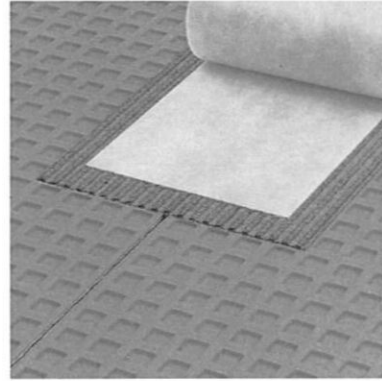
**System built up**

Annex 1

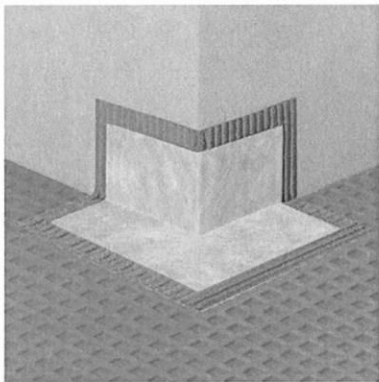
English translation prepared by DIBt



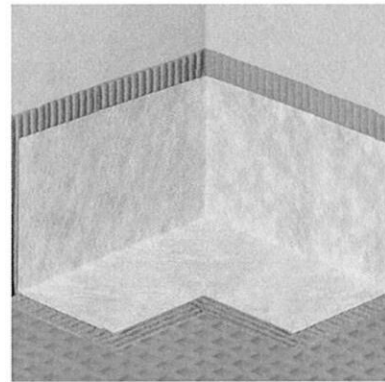
sealing tape Schlüter-KERDI-KEBA



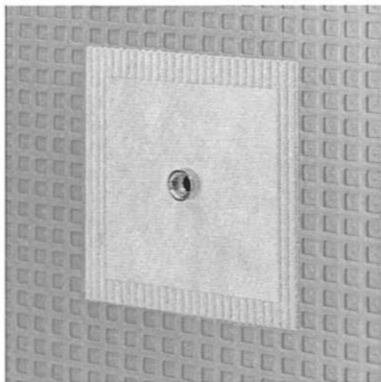
bonded sealing tape Schlüter-KERDI-KEBA



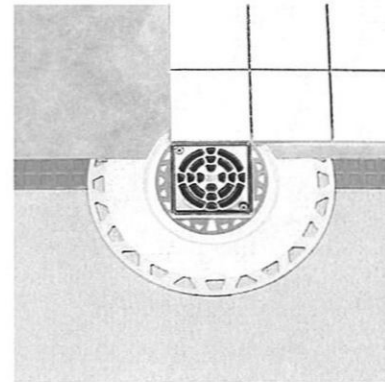
outgoing corner sleeve  
Schlüter-KERDI-KERECK



ingoing corner sleeve  
Schlüter-KERDI-KERECK



collar sleeve Schlüter-KERDI-KM



floor gully Schlüter-KERDI-DRAIN  
(not part of the kit)

Abdichtungssystem "Schlüter-KERDI", Schlüter-Systems KG

Details

Annex 2