

## European Technical Approval ETA-03/0049

English translation prepared by DIBt - Original version in German language

Handelsbezeichnung <i>Trade name</i>	Verbundabdichtung "WILOTEKT-PLUS"  <i>Composite waterproofing "WILOTEKT-PLUS"</i>
Zulassungsinhaber <i>Holder of approval</i>	bausysteme vertriebsgesellschaft mbh Kirchplatz 1 6370 Kitzbühel ÖSTERREICH
Zulassungsgegenstand und Verwendungszweck  <i>Generic type and use of construction product</i>	Flüssig aufzubringende Verbundabdichtung für Dächer unter schwerem Oberflächenschutz auf der Basis von heiß aufgetragenem polymermodifiziertem Bitumen und einer Polymerbitumenbahn  <i>Liquid applied composite waterproofing for roofs with heavy protection on the basis of hot-applied polymer-modified bitumen and a polymerbitumen sheeting</i>
Geltungsdauer: <i>Validity:</i>	vom <i>from</i> bis <i>to</i>
Herstellwerk <i>Manufacturing plant</i>	bausysteme vertriebsgesellschaft mbh Kirchplatz 1 6370 Kitzbühel ÖSTERREICH

Diese Zulassung umfasst  
*This Approval contains*

12 Seiten einschließlich 5 Anhänge  
*12 pages including 5 annexes*

Diese Zulassung ersetzt  
*This Approval replaces*

ETA-03/0049 mit Geltungsdauer vom 03.09.2009 bis 04.02.2013  
*ETA-03/0049 with validity from 03.09.2009 to 04.02.2013*

## 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.
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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 composite roof waterproofing "WILOTEKT-PLUS" is a kit consisting of a bitumen primer, a hot applied polymer-modified elastomer bitumen, a reinforcement made of glass mesh and a "WILOTEKT polymer bitumen sheeting" for waterproofing of roofs.

As an assembled system these components form the two layer composite waterproofing for inverted roofs.

Annex 1 shows the components and the system build-up of the composite waterproofing "WILOTEKT-PLUS".

The reinforcement and the polymer-modified elastomer bitumen form the 1<sup>st</sup> layer and the polymer bitumen sheeting forms the 2<sup>nd</sup> layer of the composite waterproofing. The polymer bitumen sheeting may be a CE marked sheet according to EN 13707<sup>7</sup> or EN 13969<sup>8</sup>. The sheet must meet the specifications stated in annex 2.

#### 1.2 Intended use

The composite waterproofing is intended for uses for the waterproofing of inverted roofs on concrete structural ceiling against penetration of atmospheric water 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 build-up and the processing of the system prevent possible underseepage of water.

The composite waterproofing is intended to be used for roofs decks under heavy protection with or without user load. The Annexes 3 to 5 show possible installation sequences of inverted roofs. The composite waterproofing can be used also for extensive and intensive leafy inverted roof decks, because the composite waterproofing is root resistant.

The slope of the concrete structural ceiling may be  $0\% \leq \text{slope} \leq 5\%$ .

In the manufacturer's technical dossier<sup>9</sup> (MTD) to this European technical approval (ETA) the manufacturer gave information on how to install the composite waterproofing and what erection sequences of inverted roofs are intended.

<sup>7</sup> EN 13707:2009 Flexible sheets for waterproofing - Reinforced bitumen sheets for roof waterproofing - Definitions and characteristics

<sup>8</sup> EN 13969:2007 Flexible sheets for waterproofing - Bitumen damp proof sheets including bitumen basement tanking sheets - Definitions and characteristics

<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 system 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) 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.

The verifications which are based on this ETA give reason for the assumption of an intended working life of the composite waterproofing of 25 years provided that the composite waterproofing kit is subjected to appropriate installation, use and maintenance of the sealing system. These provisions are based upon the current state of the art and 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.

## 2 Characteristics of the product and methods of verification

The components of the watertight system show the characteristic values with respect to the permissible tolerances which are stated in the manufacturer's technical dossier (MTD) to this ETA.

The permissible tolerance does not affect the characteristics of the components and the assembled system negatively.

The chemical composition and the characteristic values of the components of the kit and the manufacturing methods are confidential and deposited with DIBt. The polymer bitumen sheeting has the characteristic values which are stated in Annex 2.

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

According to Commission decision 200/553/EC verification of the external fire behaviour is not necessary, if the product is covered by gravel layer, sand filling or composite block surfacing with corresponding minimum thickness (see annexes 3 to 5).

According to the manufacturer's declaration the composite waterproofing system taking account of the EU database<sup>10</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.

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.

The assembled composite waterproofing is root resistant.

According to the requirements the verified property values of the composite waterproofing lead to the result that the composite waterproofing for inverted roofs can be used on concrete structural ceiling according to annexes 3 to 5.

<sup>10</sup>

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

### 3 Attestation of conformity of the product and CE marking

#### 3.1 System of attestation of conformity

The European Commission according to her decision of October 1998 on the procedure of attestation of conformity concerning membranes 99/90/EC (Official Journal of the European Communities N° L 29, 25 January 1999), has laid down by letter of 22 July 2002 system 3 for the procedure of attestation of conformity (AoC) (Annex III, clause 2(ii) second possibility of Directive 89/106/EEC) for the composite waterproofing of roofs.

The AoC system 3 provides:

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

#### 3.2 Responsibility

If the component sheet is CE-marked, it is provided that the attestation of conformity processes for the sheet according to EN 13707 or EN 13969 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.

##### 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.

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<sup>11</sup> which is part of the MTD to this ETA.

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.

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.

<sup>11</sup> 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.

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

#### 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 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 European technical approval.

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 test plan and observance of the required property values shall be ascertained by the approved body.

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

### 3.3 CE marking

The CE marking<sup>12</sup> shall be affixed by the manufacturer on the packaging of the kit of the composite waterproofing "WILOTEKT-PLUS" or its accompanying documents. In addition to the initials "CE" the following information shall be given:

- name 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: ETA-03/0049.

The components shall be marked as belonging to the kit "WILOTEKT-PLUS".

## 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 which are not CE-marked are factory-made according to the procedure laid down in the MTD.

The ETA is issued for the kit on basis of agreed data/information about the components, which identify the kit that has been assessed and judged and which are deposited at DIBt. Planned changes to the components of the kit or in the production process of the components, which change the results of the production process and/or the properties of the product and which are not in line with the deposited data 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 or alterations to the ETA shall be necessary.

### 4.2 Design and dimensioning

The waterproofing kit can be installed according to the information stated in the annexes 3 to 5.

<sup>12</sup>

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

The additional information by the manufacturer stated in the MTD on the installation of the composite waterproofing on the surface and details shall be followed.

#### 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,
- safety precautions during installation,
- inspecting the concrete surface for cleanliness and correct preparation before applying the composite waterproofing,
- inspecting compliance with suitable weather and curing conditions,
- specific notes to guarantee proper incorporation of the reinforcement while installation,
- 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 use 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, transportation and storage

Information on:

- packaging,
- transportation and
- storage

are given in the MTD.

#### 5.2 Use, maintenance and repair

Information on:

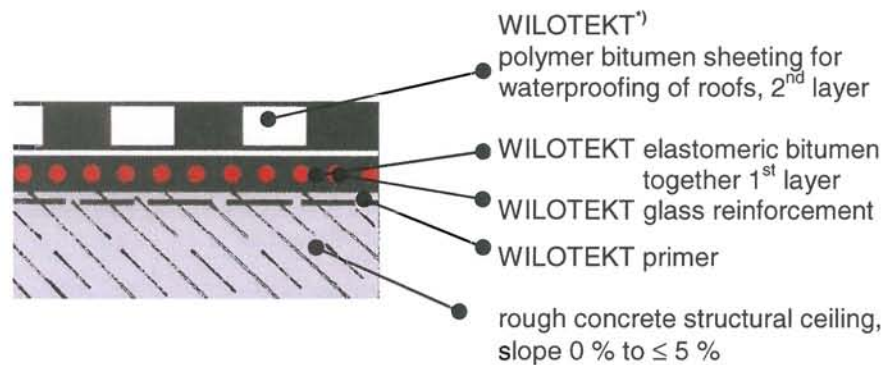
- use
- maintenance and
- repair

are given in the MTD.

Uwe Bender  
Head of Department

*beglaubigt:*  
Hemme





<sup>1)</sup> Instead of the WILOTEKT-polymer bitumen sheeting it can be used a CE marked polymer bitumen sheeting according to EN 13707 or EN 13969 which meet the specification stated in annex 2.

Applicable for the composite waterproofing "WILOTEKT-PLUS":

Reaction to fire (EN 13501-1)	class E
External fire performance (EN 13501-5)	considered to be verified according to Commission Decision 200/553/EC with application according annexes 3 to 5
Root resistance	root resistant
Statement on dangerous substances	does not contain any

Composite waterproofing "WILOTEKT-PLUS".  
bausysteme vertriebsgesellschaft mbh

**System build-up of the composite waterproofing "WILOTEKT-PLUS"**

Annex 1



**WILOTEKT Polymerbitumen – roof waterproofing sheet  
or  
polymer-bitumen roof waterproofing-sheet according  
EN 13707 respectively EN 13969 with CE-marking  
reinforced with polyesterfleece and sanded on both  
sides  
for the following requirements**

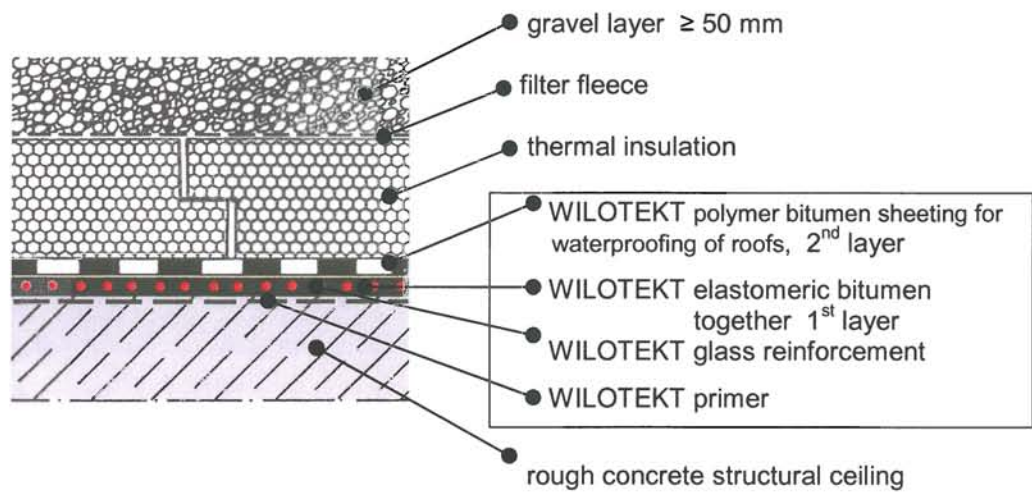
Characteristic	Test procedure	Dimension	Requirement
Reaction to fire	EN 11925-2		classe E, EN 13501-1
Thickness	EN 1849-1	mm	≥ 3.5
Mass per unit area	EN 1849-1	g/m <sup>2</sup>	≥ 3900
Visible defects	EN 1850-1		none
Dimensional stability	EN 1107-01	%	< 0.5
Tensile strength	EN 12311-1	N/50 mm	≥ 800
Tensile elongation	EN 12311-1	%	≥ 35
Resistance to tearing	EN 12310-1	N	> 260
Flexibility at low temperature	EN 1109	°C	< -22
Flow resistance at elevated temperature	EN 1110	°C	> 100

Composite waterproofing "WILOTEKT-PLUS"

**Requirements on the waterproofing sheet**

Annex 2

**inverted roof**

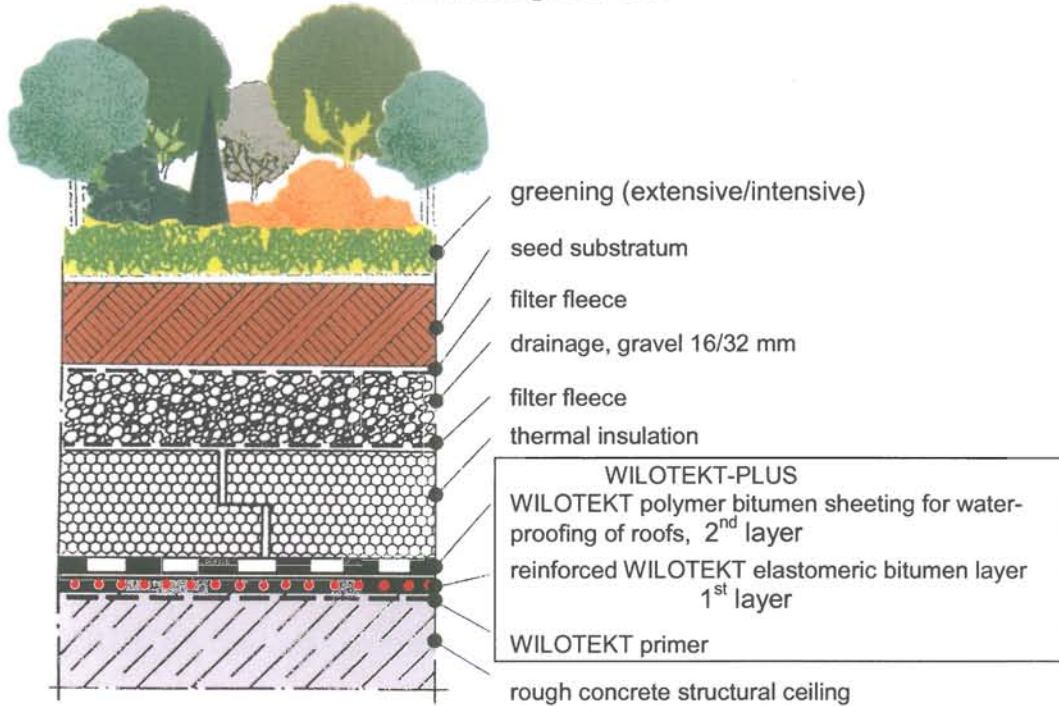


Composite waterproofing "WILOTEKT-PLUS"

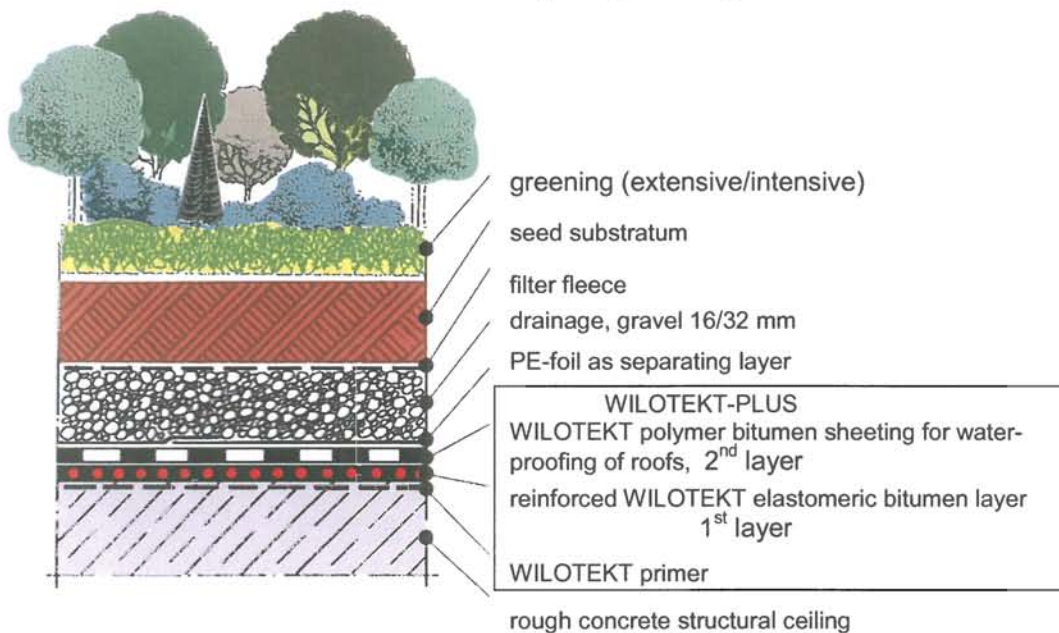
**Possible applications of the composite waterproofing "WILOTEKT-PLUS"**

Annex 3

### inverted green roof



### basement car park greening

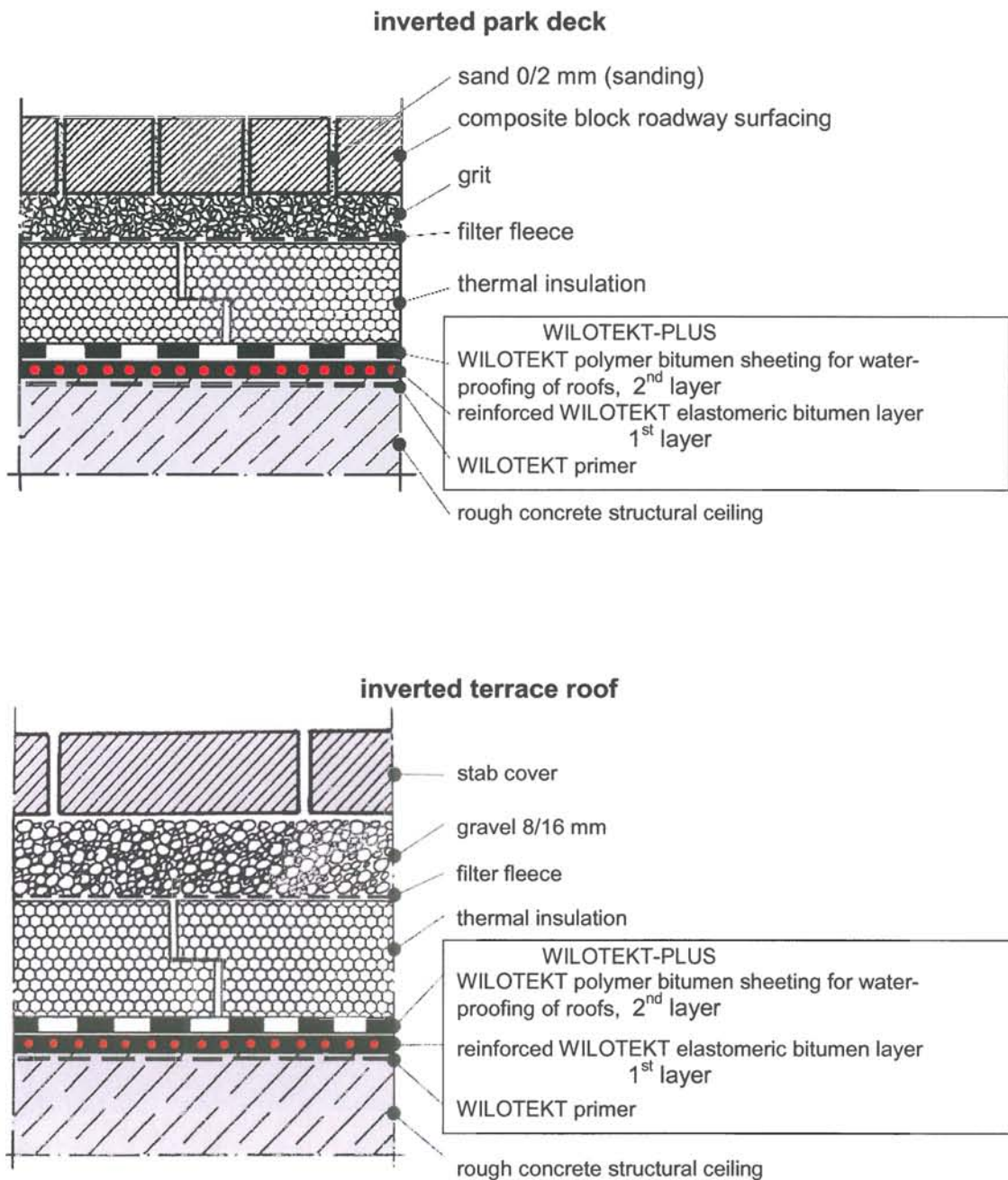


Composite waterproofing "WILOTEKT-PLUS"

Possible applications of the composite waterproofing "WILOTEKT-PLUS"

Annex 4





Composite waterproofing "WILOTEKT-PLUS"

Possible applications of the composite waterproofing "WILOTEKT-PLUS"

Annex 5