













Protocol No. 1 42 1010 / 01.10.2018 Sheet 2 of Total sheets 6

| des<br>Vo. | est/characteristic<br>cription | Measurement<br>unit | Methods<br>standardized     | Specimen No. as per the incoming/ outgoing logbook | Test results (uncertainty) | Deviations,  supplements of Environmental conditions exce test method | otions from the |
|------------|--------------------------------|---------------------|-----------------------------|--|----------------------------|---|-----------------|
| 2          |                                | 3                   | 4                           | 5  | 6                          | 7 8   |                 |
|            | 1. Single-flame source tes     | t I                 |                             | 0888-0/1   | no                         |   |                 |
|            |                                |                     |                             | 0888-0/2   | no                         |   |                 |
|            |                                |                     |                             | 0888-0/3   | no                         |   |                 |
|            |                                |                     |                             | 0888-0/4   | no                         | -<br>-  |                 |
|            |                                |                     |                             | 0888-0/5   | no                         |   |                 |
|            |                                |                     |                             | 0888-0/6   | no                         | T 0.00  |                 |
| 1 I        | gnition                        |                     | BDS EN ISO 11925-<br>2:2011 | 0888-0/7   | no                         | T=24°C<br>RH = 54%  | None            |
|            |                                |                     |                             | 0888-0/8   | no                         |   |                 |
|            |                                |                     |                             | 0888-0/9   | по                         |   |                 |
|            |                                |                     |                             | 0888-0/10  | no                         |   |                 |
|            |                                |                     |                             | 0888-0/11  | no                         |   |                 |
|            |                                |                     |                             | 0888-0/12  | no                         |   |                 |
|            |                                |                     |                             | 0888-0/1   | no                         |   |                 |
|            |                                |                     |                             | 0888 0/2   | no                         |   |                 |
|            |                                |                     |                             | 0888-0/3   | no                         |   |                 |
| ,          | Flame propagation up to        |                     | BDS EN ISO 11925-<br>2:2011 | 0888-0/4   | no                         | T=24°C  | None            |
| 50         | mm (Fs)                        |                     | 2.2011                      | 0888-0/5   | no                         | RH = 54%  |                 |
|            |                                |                     |                             | 0888-0/6   | no                         |   |                 |



Protocol No.1 42 1010 / 01.10.2018 Sheet 3 of Total sheets 6

|     |   |        |                             |  |                            | S  | Sheet 3 of Total sheets |
|-----|---|--------|-----------------------------|--|----------------------------|--|-------------------------|
|     | asurement<br>t/characteristic description<br>unit |        | Methods<br>standardized     | Specimen No. as per the incoming/ outgoing logbook | Test results (uncertainty) | Deviations,  Environments of exceptions fro conditions test method | г                       |
| 14  |   |        | 4                           |  | Ö                          | 7 0  |                         |
|     |   |        |                             | 0888-0/7<br>                                       | no<br>no                   |  |                         |
|     |   |        |                             | 0888-0/9   | no                         |  |                         |
|     |   |        |                             | 0888-0/10<br>0888-0/11                             | no<br>no                   |  |                         |
|     |   |        |                             | 0888-0/12  | no                         |  |                         |
|     |   |        |                             | 0888-0/1<br>0888-0/2                               | 0                          |  |                         |
|     |   |        |                             | 0888-0/3   | 0                          |  |                         |
|     |   |        |                             | 0888-0/4   | 0                          |  |                         |
|     |   |        |                             | 0888-0/5<br>0888-0/6                               | 0                          |  |                         |
| 1.3 | ime for achieving 150 mm                          | second | BDS EN ISO 11925-<br>2:2011 | 0888-0/7   | 0                          | T=24°C<br>RH = 54%   | None                    |
|     |   |        |                             | 0888-0/8   | 0                          |  |                         |
| 1   |   |        |                             | 0888-0/9<br>0888-0/10                              | 0                          | -  |                         |
|     |   |        |                             | 0888-0/11  | 0                          |  |                         |
|     |   |        |                             | 0888-0/12  | 0                          |  |                         |
|     |   | 1      |                             | 1  |                            | 1  | 1                       |



Protocol No.1 42 1010/ 01.10.2018

|     |   |   |                                  |  |  | S   | heet 4 of Total sheets 6 |
|-----|---|---|----------------------------------|--|--|---|--------------------------|
| Tes | asurement<br>t/characteristic description<br>unit |   | Methods<br>standardized<br>4     | Specimen No. as<br>per<br>the incoming/<br>outgoing logbook  | Test results (uncertainty)   | Deviations,  Environmental  exceptions fro conditions test method | or<br>om the             |
| 1.4 | Ignition of the filter paper                      | - | ч<br>BDS EN ISO 11925-2:<br>2011 | 0888-0/1 0888-0/2 0888-0/3 0888-0/4 0888-0/5 0888-0/6 0888-0/7 0888-0/8 0888-0/9 0888-0/10 0888-0/11 0888-0/12 | no n   | T=24°C<br>RH = 54%  | None                     |
| 1.5 | Specimen behaviour                                | - | BDS EN ISO 11925-<br>2:2011      | 0888-0/1<br>0888-0/2<br>0888-0/3   | does not form smoke no flaming particles does not form smoke no flaming particles does not form smoke no flaming particles | T=24°C<br>RH = 54%  | None                     |



Protocol No.1 42 1010 / 01.10.2018 Sheet 5 of Total sheets 6

|                     |                                  |                  |                             |   |   | 3   | Sheet 5 of Total sheets |
|---------------------|----------------------------------|------------------|-----------------------------|---|---|---|-------------------------|
| Pos<br>. Tes<br>No. | t/characteristic description Mea | surement<br>unit | Methods<br>standardized     | Specimen No. as<br>per<br>the incoming/<br>outgoing logbook | Test results (uncertainty)                  | Deviations, supplements o Environmental conditions exce test method | ptions from the         |
| 1                   | 2                                | 3                | 4                           | 5   | 6   | 7 8   |                         |
|                     |                                  |                  |                             | 0888-0/4  | does not form smoke<br>no flaming particles |   |                         |
|                     |                                  |                  |                             | 0888-0/5  | does not form smoke<br>no flaming particles |   |                         |
|                     |                                  |                  |                             | 0888-0/6  | does not form smoke<br>no flaming particles |   |                         |
|                     |                                  |                  |                             | 0888-0/7  | does not form smoke<br>no flaming particles |   |                         |
| 1.5                 | Specimen behaviour               |                  | BDS EN ISO 11925-<br>2:2011 | 0888-0/8  | does not form smoke<br>no flaming particles | T=24°C<br>RH = 54%  | None                    |
|                     |                                  |                  |                             | 0888-0/9  | does not form smoke<br>no flaming particles |   |                         |
|                     |                                  |                  |                             | 0888-0/10   | does not form smoke<br>no flaming particles |   |                         |
|                     |                                  |                  |                             | 0888-0/11   | does not form smoke<br>no flaming particles |   |                         |
|                     |                                  |                  |                             | 0888-0/12   | does not form smoke<br>no flaming particles |   |                         |



Protocol No.1 42 1010 / 01.10.2018 Sheet 6 of Total sheets 6

#### 8. Additional information required as per:

- BDS EN ISO 11925-2:2011
- Conditioning of the specimens for testing (temperature 23±2 °C and relative humidity 50±5%) 2 weeks
- Flame application time 15 seconds to the surface of specimens with incoming No. 0888-0/1; 0888-0/2; 0888-0/3; 0888-0/4; 0888-0/6 and 15 seconds along the edge of specimens with incoming No. 0888-0/8; 0888-0/9; 0888-0/10; 0888-0/11; 0888-0/12.

NOTE: The test results refer only to the behaviour of the product specimens tested and the test conditions defined; they are not intended to be the only criterion for determining the potential hazard of fire for the product during its use.

NOTE I: The test results refer only to the specimens tested.

NOTE II: The test protocol may be reproduced only in full and with the prior written consent of the laboratory.

Test conducted by: /sgd.: ill./ For the Laboratory Manage

r: /sgd.: ill./ (D. Teneva) (eng. K. Boycheva)

Round stamp of the Construction Products Testing Laboratory

#### Technical card

### Angro NEO EPS 80+®

Description: Expanded polystyrene graphite plates for construction insulation

with increased thermal insulation effect.

Application: For thermal insulation of outer walls in a combined thermal insulation system

(WDVS) according to BDS EN 13499 and ETAG 004. Particularly suitable for passive

and low energy buildings.

Size: Plates with length 1000 mm, width 500 mm, thickness from 20 to 200 mm

Edge Shape: Straight Edging (GK), Step edging (SF) - custom made.

| Quantity | in |
|----------|----|
| package  |    |

| Thickness              | Length x width            | Number of plates | Spac | Rd    |
|------------------------|---------------------------|------------------|------|-------|
| (mm)                   | (mm)                      |                  | е    | m²K/W |
|                        | 2010                      | 000 x 50024      | (TŽ) | 0,6   |
|                        | 3010                      | 000 x 50016      | 0    | 0     |
|                        | 4010                      | 000 x 50012      | 8,0  | 0,9   |
|                        | 5010                      | 000 x 50010      | 6,0  | 5     |
|                        | 601                       | L000 x 5008      | 5,0  | 1,2   |
|                        | 701                       | L000 x 5007      | 4,0  | 5     |
|                        | 801                       | L000 x 5006      | 3,5  | 1,6   |
|                        | 901                       | L000 x 5005      | 3,0  | 0     |
|                        | 1001                      | L000 x 5005      | 2,5  | 1,9   |
|                        | 1201                      | L000 x 5004      | 2,5  | 0     |
|                        | 1401                      | L000 x 5004      | 2,0  | 2,2   |
|                        | 1601                      | L000 x 5003      | 2,0  | 5     |
|                        | 1801                      | L000 x 5003      | 1,5  | 2,5   |
|                        | 2001                      | L000 x 5002      | 1,5  | 5     |
| Other thicknesses, pla | ate formats and edges - o | n request.       | 1,0  | 2,9   |
| Expanded polysty       | rene (EPS) according      | to EN 13163      |      | 0     |
|                        |                           |                  |      | 3,2   |
| EPS® F + marking       | on the short side of t    | he package       |      | 0     |
|                        |                           |                  |      | 3,8   |
|                        | _                         |                  |      | 5     |

Identification code:

Product type:

Designation:

EPS-EN 13163-T2-L2-W2-Sb2-P5-DS(N)2-DS(70,-)1-BS150-CS(10)80-TR150-WL(T)2-MU(30-70) 4,5 0 5,1

5,8 0 6,4

5

Temp. of application:Up to 85°C. Do not expose to direct sunlight.

Processing: According to the operating instructions and requirements of the component manufacturer of the combined thermal insulation system.

Angro NEO EPS 80+® does not contain fluorochlorine carbons (FCKW), HFCKW, HFKW, as well as HBCD.

Последна редакция: 09/2019

Angro Trade Ltd.

1360 София,
Бул Европа 11-

InSulation Shop: LIMASSOL Galinou 4 & Omonoias T: 25 378 103 F: 25 313 176 Head office - Store House: LARNAKA Fila G605 Sofiaippou T: 24 102 525 F: 24 122 586 www.angro.bg
www.snscyprus.com
7000 70 35



# ANGRO - PORTLAND TERMO PT40 - adhesive for thermal insulation boards

#### PRODUCT DESCRIPTION

Dry mixture for bonding of heat-insulating panels. Very good adhesion on mineral bases and on thermal insulation boards. Hydro and frost-resistant. Contains fiber against cracking.

#### **APPLICATION**

For internal and external use. For bonding of heat insulating panels of extruded and expanded polystyrene, styrofoam, fiber, styrode, styrophon, monodur, mineral and glass wool, etc..

#### **Preparation of the base:**

The base must be clean, strong, dry, have sufficient bearing capacity, free from any dirt, grease, old paint, etc. Larger unevenness of the base is smooth with a suitable plaster, for example with lime-cement plaster. Primed with Deep Penetrating "AGG 125 Deep Penetrating Primer - Angro" or "AC 155 Contact Primer - Angro"

#### Mixing and application:

5 parts of the dry mixture are stirred with 2 parts of water with a mechanical stirrer, the water being added in portions. After 5 minutes, stir again. The mixed quantity can be used at 20 ° C for about 5 hours. The compressed material should never be diluted with water.

The adhesive can be applied to one of the two glued surfaces. When applying it on the heat-insulating board, first apply the glue on the periphery of the edge of the board and the board itself in 5-6 places with a jagged stainless steel spatula. With equal bases, adhesion can be done with a thin layer of glue spread with a notched trowel over the entire surface of the slab. In the case of brick masonry, the glue can be applied in a thicker layer (even or spot) in order to fill the roughness of the base

Dowelling can begin not earlier than 24 hours after the heat insulation boards (at 20 ° C).

#### **Additional instructions:**

The product contains cement.

Irritating to eyes and skin.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable gloves.

.

#### **TECHICAL DATA**

Appearance: Powder Odor: Characteristic pH value at 20 C: about 12

Bulk density: about  $1.1 \div 1.7g$  / cm<sup>3</sup> Solubility in water: about 1.5% at 20 ° C

Open time: about 40 minutes

Tensile Brightness with Concrete &

Polystyrene after 7 days stay

Under normal conditions and 24 hours in

water:> 0.1 N / mm2

#### **APPLICATION DETAILS**

The cost of the product depends on the base and thickness of the reinforcement mesh. Approximate cost: For bonding 3-4 kg / m2

#### **PACKAGING**

25 kg baggs /pallet - 48 pcs

#### **EXPIRATION DATE**

12 months from date of production

Store in dry warehouses







Approval body for construction products and types of construction

**Bautechnisches Prüfamt** 

An institution established by the Federal and Laender Governments



### European Technical Assessment

ETA-16/0509 of 17 August 2016

English translation prepared by DIBt - Original version in German language

#### **General Part**

Technical Assessment Body issuing the Deutsches Institut für Bautechnik European Technical Assessment:

Trade name of the construction product LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

Product family Nailed-in plastic anchor for fixing of external thermal to which the construction product belongs insulation composite systems with rendering in concrete and masonry

Manufacturer Klimas Sp. z o.o.

Kuznica Kiedrzynska ul. Wincentego Witosa 135/137 42-233 MYKANÓW

**POLEN** 

Manufacturing plant Klimas Sp. z o.o.

This European Technical Assessment 19 pages including 3 annexes which form an integral part contains of this assessment

This European Technical Assessment is Guideline for European technical approval of "Plastic issued in accordance with Regulation (EU) anchors for fixing of external thermal insulation composite No 305/2011, on the basis of systems with rendering", ETAG 014, edition February 2011,

used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011.



## European Technical Assessment ETA-16/0509

Page 2 of 19 | 17 August 2016

English translation prepared by DIBt

The European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may only be made with the written consent of the issuing Technical Assessment Body. Any partial reproduction shall be identified as such.

This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission in accordance with Article 25(3) of Regulation (EU) No 305/2011.

Z43449.16 8.06.04-182/16



**European Technical Assessment ETA-16/0509**English translation prepared by DIBt

Page 3 of 19 | 17 August 2016

#### **Specific part**

#### 1 Technical description of the product

The nailed-in anchor LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10 consists of an anchor sleeve with an enlarged shaft, spreading zone subsequently, an insulation plate made of polyethylene and an accompanying specific nail of galvanised steel for the type LMX and LGX and an accompanying specific nail of polyamide for the type LTX. The serrated expanding part of the anchor sleeve is slotted.

The anchor may in addition be combined with the anchor plates TDX-P-90 / TDX-90 and TDX-P-140 / TDX-140.

An illustration and the description of the product are given in Annex A.

## 2 Specification of the intended use in accordance with the applicable European Assessment Document

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The verification and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the anchor of at least 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.

#### 3 Performance of the product and references to the methods used for its assessment

#### 3.1 Mechanical resistance and stability (BWR 1)

The essential characteristics regarding mechanical resistance and stability are included under the Basic Works Requirement Safety in use.

#### 3.2 Hygiene, health and the environment (BWR 3)

Regarding dangerous substances there may be requirements (e.g. transposed European legislation and national laws, regulations and administrative provisions) applicable to the products falling within the scope of this European Technical Assessment. In order to meet the provisions of Regulation (EU) No 305/2011, these requirements need also to be complied with, when and where they apply.

#### 3.3 Safety and accessibility in use (BWR 4)

| ssential characteristic Performance                              |
|--|
| haracter <mark>istic tension resistance See Annex C 1, C2</mark> |
| dge distances and spacing See Annex B 2                          |
| oint ther <u>mal transmittance See Annex C 3</u>                 |
| late stiffness See Annex C 3                                     |
| isplacements See Annex C 4                                       |
| .4 Susta <del>inable use of natural resources (BWR 7)</del>      |

For the sustainable use of natural resources no performance was determined for this product.

Z43449.16 8.06.04-182/16



### European Technical Assessment ETA-16/0509

Page 4 of 19 | 17 August 2016

English translation prepared by DIBt

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with guideline for European technical approval ETAG 014, February 2011 used as European Assessment Document (EAD) according to Article 66 Paragraph 3 of Regulation (EU) No 305/2011 the applicable European legal act is: 97/463/EC.

The system to be applied is: 2+

Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

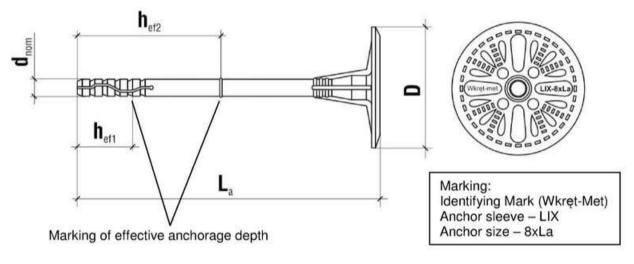
Issued in Berlin on 17 August 2016 by Deutsches Institut für Bautechnik

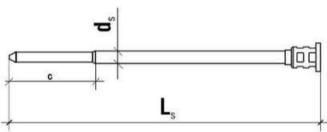
Uwe Bender Head of Department *beglaubigt:*Ziegler

Z43449.16 8.06.04-182/16









Accompanying specific nail TTX-4,8

| Anchor<br>Type | Colour  | Anchor<br>Sleeve |   |                 | Specific nail                            |                |            |
|----------------|---------|------------------|---|-----------------|--|----------------|------------|
|                |         | Colour           | d <sub>nom</sub>                                | h <sub>ef</sub> | min L <sub>a</sub><br>max L <sub>a</sub> | d <sub>s</sub> | С          |
|                |         | [mm]             | [mm]  | [mm]            | [mm]                                     | [mm]           | [mm]       |
| LTX-8          | natural | 8                | h <sub>ef1</sub> = 25<br>h <sub>ef2</sub> = 65* | 95<br>195       | 4,8                                      | 44             | 100<br>200 |

<sup>\*)</sup> for category E

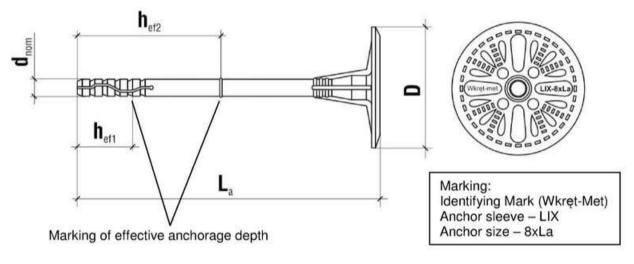
Determination of maximum thickness of insulation h<sub>D</sub> [mm] for LTX-8:

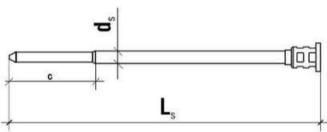
$$\begin{array}{lll} & h_D & = L_a - t_{tol} - h_{ef} \\ \text{e.g.} & h_D & = 95 - 10 - 25 \\ & h_{Dmax} & = 60 \end{array} \qquad (L_a = \text{e.g. } 95; \, t_{tol} = 10)$$

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10            |           |
|--|-----------|
| Product description                                    | Annex A 2 |
| LTX-8 - marking and dimension of the anchor sleeve LIX |           |
| Expansion element TTX                                  |           |









Accompanying specific nail TTX-4,8

| Anchor<br>Type | Colour  | Anchor<br>Sleeve |   |                 | Specific nail                            |                |            |
|----------------|---------|------------------|---|-----------------|--|----------------|------------|
|                |         | Colour           | d <sub>nom</sub>                                | h <sub>ef</sub> | min L <sub>a</sub><br>max L <sub>a</sub> | d <sub>s</sub> | С          |
|                |         | [mm]             | [mm]  | [mm]            | [mm]                                     | [mm]           | [mm]       |
| LTX-8          | natural | 8                | h <sub>ef1</sub> = 25<br>h <sub>ef2</sub> = 65* | 95<br>195       | 4,8                                      | 44             | 100<br>200 |

<sup>\*)</sup> for category E

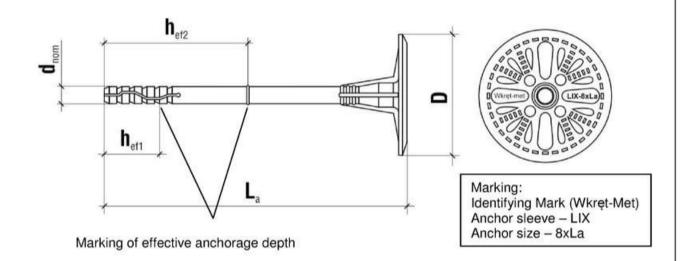
Determination of maximum thickness of insulation h<sub>D</sub> [mm] for LTX-8:

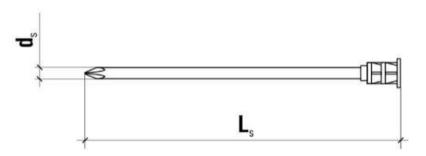
$$\begin{array}{lll} & h_D & = L_a - t_{tol} - h_{ef} \\ \text{e.g.} & h_D & = 95 - 10 - 25 \\ & h_{Dmax} & = 60 \end{array} \qquad (L_a = \text{e.g. } 95; \, t_{tol} = 10)$$

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10            |           |
|--|-----------|
| Product description                                    | Annex A 2 |
| LTX-8 - marking and dimension of the anchor sleeve LIX |           |
| Expansion element TTX                                  |           |



#### LMX-8





Accompanying specific nail TMX-4,4

| ble A2: Dime   | ensions |                  |                                   |  |                  |  |
|----------------|---------|------------------|-----------------------------------|--|------------------|--|
| Anchor<br>Type | Colour  | Anchor<br>Sleeve |                                   |  | Specific<br>nail |  |
|                |         | d <sub>nom</sub> | h <sub>ef</sub>                   | min L <sub>a</sub><br>max L <sub>a</sub> | ds               | min L <sub>s</sub><br>max L <sub>s</sub> |
|                |         | [mm]             | [mm]                              | [mm]                                     | [mm]             | [mm]                                     |
| LMX-8          | natural | 8                | $h_{ef1} = 25$<br>$h_{ef2} = 65*$ | 95<br>295                                | 4,4              | 100<br>300                               |

<sup>\*)</sup> for category E

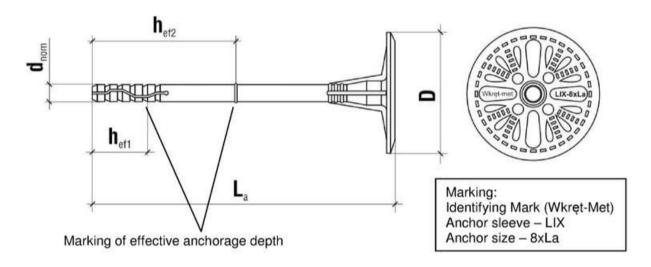
Determination of maximum thickness of insulation h<sub>D</sub> [mm] for LMX-8:

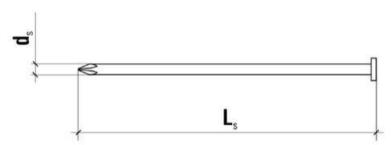
$$\begin{array}{lll} & h_D & = L_a - t_{tol} - h_{ef} & (L_a = e.g.~95;~t_{tol} = 10) \\ e.g. & h_D & = 95 - 10 - 25 \\ & h_{Dmax} & = 60 \end{array}$$

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10            |           |
|--|-----------|
| Product description                                    | Annex A 3 |
| LMX-8 - marking and dimension of the anchor sleeve LIX |           |
| Expansion element TMX                                  |           |



#### LGX-8





Accompanying specific nail TGX-4,4

|                | - 1    | Anchor<br>Sleeve |                 | Specific nail                            |                |  |
|----------------|--------|------------------|-----------------|--|----------------|--|
| Anchor<br>Type | Colour | $d_{nom}$        | h <sub>ef</sub> | min L <sub>a</sub><br>max L <sub>a</sub> | d <sub>s</sub> | min L <sub>s</sub><br>max L <sub>s</sub> |
|                |        | [mm]             | [mm]            | [mm]                                     | [mm]           | [mm]                                     |

<sup>\*)</sup> for category E

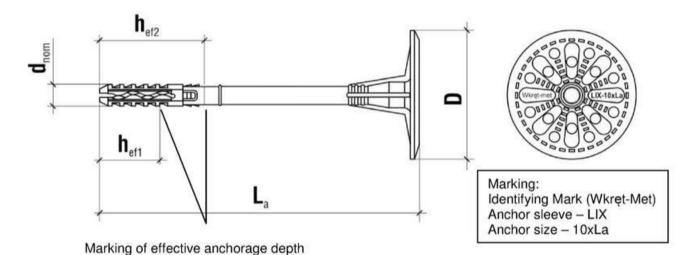
Determination of maximum thickness of insulation h<sub>D</sub> [mm] for LGX-8:

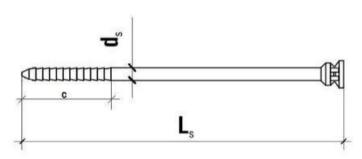
$$\begin{array}{lll} & h_D & = L_a - t_{tol} - h_{ef} & (L_a = e.g.~95;~t_{tol} = 10) \\ e.g. & h_D & = 95 - 10 - 25 \\ & h_{Dmax} & = 60 & \end{array}$$

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10                                     |           |
|---|-----------|
| Product description   | Annex A 4 |
| LGX-8 - marking and dimension of the anchor sleeve LIX<br>Expansion element TGX |           |









Accompanying specific nail TTX-5,5

| Anchor |         | Anchor<br>Sleeve         |                                    |  |                        | Specific nail |  |
|--------|---------|--------------------------|------------------------------------|--|------------------------|---------------|--|
| Туре   | Colour  | d <sub>nom</sub><br>[mm] | h <sub>ef</sub> [mm]               | min L <sub>a</sub><br>max L <sub>a</sub><br>[mm] | d <sub>s</sub><br>[mm] | c<br>[mm]     | min L <sub>s</sub><br>max L <sub>s</sub><br>[mm] |
| LTX-10 | natural | 10                       | $h_{ef1} = 30$<br>$h_{ef2} = 50^*$ | 70<br>260  | 5,5                    | 44            | 75<br>265  |

<sup>\*)</sup> for category E

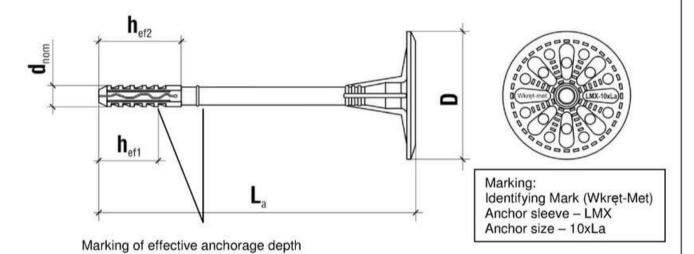
Determination of maximum thickness of insulation h<sub>D</sub> [mm] for LTX-10:

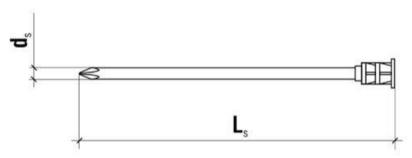
$$\begin{array}{lll} & h_D & = L_a - t_{tol} - h_{ef} & (L_a = e.g.~70;~t_{tol} = 10) \\ e.g. & h_D & = 70 - 10 - 30 \\ & h_{Dmax} & = 30 & \end{array}$$

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10             |           |
|---|-----------|
| Product description                                     | Annex A 5 |
| LTX-10 - marking and dimension of the anchor sleeve LIX |           |
| Expansion element TTX                                   |           |









Accompanying specific nail TMX-4,4

|        |         |                  | Anchor                             |  | A0   | ecific                                   |
|--------|---------|------------------|------------------------------------|--|------|--|
| Anchor | Sleeve  |                  | nail                               |  |      |  |
| Type   | Colour  | d <sub>nom</sub> | h <sub>ef</sub>                    | min L <sub>a</sub><br>max L <sub>a</sub> | ds   | min L <sub>s</sub><br>max L <sub>s</sub> |
|        |         | [mm]             | [mm]                               | [mm]                                     | [mm] | [mm]                                     |
| LMX-10 | natural | 10               | $h_{ef1} = 30$<br>$h_{ef2} = 50^*$ | 70<br>300                                | 4,4  | 70<br>300                                |

<sup>\*)</sup> for category E

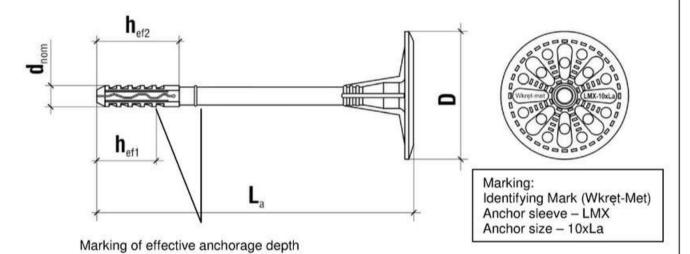
Determination of maximum thickness of insulation  $h_D$  [mm] for LMX-10:

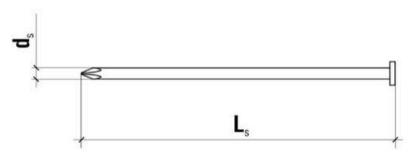
$$\begin{array}{lll} & h_D & = L_a - t_{tol} - h_{ef} & (L_a = e.g.~70;~t_{tol} = 10) \\ e.g. & h_D & = 70 - 10 - 30 \\ & h_{Dmax} & = 30 \end{array}$$

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10             |           |
|---|-----------|
| Product description                                     | Annex A 6 |
| LMX-10 - marking and dimension of the anchor sleeve LMX |           |
| Expansion element TMX                                   |           |









Accompanying specific nail TGX-4,4

| ble A6: Dime | ensions |           |                                    |  |           |  |
|--------------|---------|-----------|------------------------------------|--|-----------|--|
| Anchor       |         |           | Anchor<br>Sleeve                   |  | Spe<br>na |  |
| Туре         | Colour  | $d_{nom}$ | h <sub>ef</sub>                    | min L <sub>a</sub><br>max L <sub>a</sub> | ds        | min L <sub>s</sub><br>max L <sub>s</sub> |
|              |         | [mm]      | [mm]                               | [mm]                                     | [mm]      | [mm]                                     |
| LGX-10       | natural | 10        | $h_{ef1} = 30$<br>$h_{ef2} = 50^*$ | 70<br>300                                | 4,4       | 70<br>300                                |

<sup>\*)</sup> for category E

Determination of maximum thickness of insulation h<sub>D</sub> [mm] for LGX-10:

$$\begin{array}{lll} & h_D & = L_a - t_{tol} - h_{ef} \\ \text{e.g.} & h_D & = 70 - 10 - 30 \\ & h_{Dmax} & = 30 \end{array} \qquad (L_a = \text{e.g. 70; } t_{tol} = 10)$$

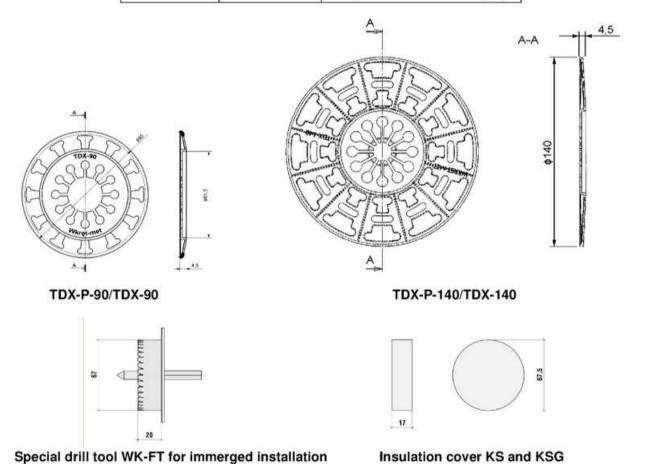
| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10             |           |
|---|-----------|
| Product description                                     | Annex A 7 |
| LGX-10 - marking and dimension of the anchor sleeve LMX |           |
| Expansion element TGX                                   |           |



| Table A7: Materials    |  |
|------------------------|--|
| Name                   | Materials  |
| Anchor sleeve          | Polyethylene, colour: natural  |
| Specific nail TTX      | Polyamide GF, colour: black or natural   |
| Specific nail TMX, TGX | Steel, electro galvanized $\geq$ 5 µm according to EN ISO 4042:2001, white passivated, $f_{yk} \geq$ 420 N/mm <sup>2</sup> |

Table A8: Insulation discs, diameters and material

| Plate type | Outer diameter [mm] | Material                        |
|------------|---------------------|---------------------------------|
| TDX-P-90   | 90                  | Polyethylene, natural or grey   |
| TDX-90     | 90                  | Polyamide +GF, natural or grey  |
| TDX-P-140  | 140                 | Polyethylene, natural or grey   |
| TDX-140    | 140                 | Polyamide + GF, natural or grey |



| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10                          |           |
|--|-----------|
| Product description  | Annex A 8 |
| Materials,   |           |
| Slip on plates with LTX-8 / LMX-8 / LGX-8 / LTX-10 / LMX-10 / LGX-10 |           |

English translation prepared by DIBt



#### Specifications of intended use

#### Anchorages subject to:

 The anchor may only be used for transmission of wind suction loads and shall not be used for the transmission of dead loads of the thermal insulation composite system.

#### Base materials:

- Normal weight concrete (use category A) according to Annex C 1
- Solid masonry (use category B), according to Annex C 1
- · Hollow or perforated masonry (use category C), according to Annex C 1
- Lightweight aggregate concrete (use category D), according to Annex C 1
- · Autoclaved aerated concrete (use category E), according to Annex C 1
- For other base materials of the use categories A, B, C, D or E the characteristic resistance of the anchor may be determined by job site tests according to ETAG 014 Edition February 2011, Annex D.

#### **Temperature Range:**

0°C to +40°C (max. short term temperature +40°C and max. long term temperature +24°C)

#### Design:

- The anchorages are designed in accordance with the ETAG 014 Edition February 2011 under the responsibility of an engineer experienced in anchorages and masonry work.
- Verifiable calculation notes and drawings are prepared taking account of the loads to be anchored.
   The position of the anchor is indicated on the design drawings.
- Fasteners are only to be used for multiple fixings of thermal insulation composite systems.

#### Installation:

- Hole drilling by the drill modes according to Annex C 1
- Anchor installation carried out by appropriately qualified personnel and under the supervision of the person responsible for technical matters of the site.
- Installation temperature from 0°C to +40°C
- Exposure to UV due to solar radiation of the anchor not protected by rendering ≤ 6 weeks

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10 |           |
|---|-----------|
| Intended use<br>Specifications              | Annex B 1 |

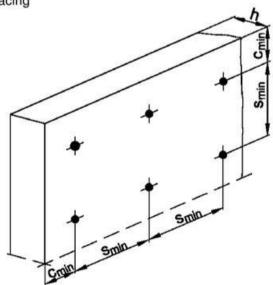


|  |                         | ABCD | E    |
|--|-------------------------|------|------|
| Drill hole diameter                    | d <sub>0</sub> [mm] =   | 8    | 8    |
| Cutting diameter of drill bit          | d <sub>cut</sub> [mm] ≤ | 8,45 | 8,45 |
| Depth of drilles hole to deepest point | h₁ [mm] ≥               | 35   | 75   |
| Effective anchorage depth              | h <sub>ef</sub> [mm] ≥  | 25   | 65   |

| Table B2: Installation parameters for I | TX-10 / LMX-10 / LGX-10 |       |       |
|---|-------------------------|-------|-------|
|   |                         | ABCD  | E     |
| Drill hole diameter                     | d <sub>0</sub> [mm] =   | 10    | 10    |
| Cutting diameter of drill bit           | d <sub>cut</sub> [mm] ≤ | 10,45 | 10,45 |
| Depth of drilles hole to deepest point  | h₁ [mm] ≥               | 40    | 60    |
| Effective anchorage depth               | h <sub>ef</sub> [mm] ≥  | 30    | 50    |

| Table B3: Anchor distances and dimensi | ons of members          |     |
|--|-------------------------|-----|
| Minimum allowable spacing              | s <sub>min</sub> ≥ [mm] | 100 |
| Minimum allowable edge distance        | $c_{min} \geq [mm]$     | 100 |
| Minimum thickness of member            | h ≥ [mm]                | 100 |

Scheme of distance and spacing

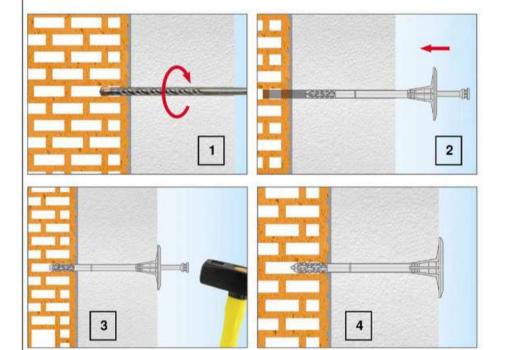


| Annex B 2 |
|-----------|
|           |
|           |



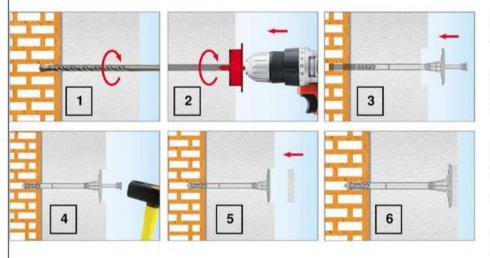
#### Installation instructions

surface mount



- Drill the hole perpendicular to the substrate surface. Clean the drill hole.
- Place the anchor into the drill hole. The bottom side of the plate must be flush with the ETICS.
- 3) Drive in the specific nail with the hammer.
- 4) Installed condition.

#### immerged mount



- 1) Drill the hole perpendicular to the substrate surface. Clean the drill hole.
- 2) Drill the recess for immerged installation with the special drilling tool WK-FT.
- 3) Place the anchor into the drill hole. The bottom side of the plate must be flush with the recess in the ETICS.
- 4) Drive in the specific nail with the hammer.
- 5) Insert the insulation cover.
- 6) Installed condition.

#### LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10

#### Intended use

Installation instructions - surface mount, immerged mount

Annex B 3



| Anchor type   |   |  |   |                 | LTX-8                   | LMX-8                   |
|---|---|--|---|-----------------|-------------------------|-------------------------|
| Base materials  | Bulk<br>density<br>class<br>P<br>[kg/dm³] | minimum<br>compressive<br>strength<br>f <sub>b</sub><br>[N/mm <sup>2</sup> ] | General<br>remarks  | Drill<br>method | N <sub>Rk</sub><br>[kN] | N <sub>Rk</sub><br>[kN] |
| Concrete C12/15 (EN 206-1:2000)   | ≥ 2,25                                    | ≥ 30   |   | hammer          | 0,5                     | 0,5                     |
| Concrete C20/25 - C50/60 (EN 206-1:2000)  | ≥ 2,30                                    | ≥ 65   |   | hammer          | 0,75                    | 0,75                    |
| Clay bricks MZ<br>e.g. according to EN 771-1:2011                                       | ≥ 2,0                                     | ≥ 20   |   | hammer          | 0,75                    | 0,75                    |
| Calcium silicate bricks KS e.g. according to EN 771-2:2011                              | ≥ 2,0                                     | ≥ 20   |   | hammer          | 0,75                    | 0,75                    |
| Calcium silicate hollow block KSL e.g. according to EN 771-2:2011                       | ≥ 1,6                                     | ≥ 12   | Vertically<br>perforation<br>more than<br>15 % and<br>less than<br>50 % | hammer          | 0,75                    | 0,75                    |
| Vertically perforated clay bricks HLZ e.g. according to EN 771-1:2011                   | ≥ 1,2                                     | ≥ 12   | Vertically<br>perforation<br>more than<br>15 % and<br>less than<br>50 % | rotary          | 0,6                     | 0,6                     |
| ertically perforated clay bricks porotherm 25 e.g. according to EN 771-1:2011           | ≥ 0,8                                     | ≥ 10   | Vertically<br>perforation<br>more than<br>15 %                          | rotary          | 0,4                     | 0,4                     |
| Autoclaved concrete blocks AAC2<br>e.g. according to EN 771-4:2011                      | ≥ 0,35                                    | ≥ 2  |   | rotary          | 0,75                    | 0,75                    |
| Autoclaved concrete blocks AAC7<br>e.g. according to EN 771-4:2011                      | ≥ 0,65                                    | ≥ 3,5  |   | rotary          | 0,9                     | 0,9                     |
| Lightweight concrete blocks LAC<br>e.g. according to EN 1520:2011-06 /<br>EN 771-3:2011 | ≥ 0,88                                    | ≥ 5  |   | rotary          | 0,6                     | 0,75                    |

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10   |           |
|---|-----------|
| Performances                                  | Annex C 1 |
| Characteristic resistance LTX-8, LMX-8, LGX-8 |           |



| anchor type   |   |   |   |                 | LTX-10                  | LMX-10<br>LGX-10        |
|---|---|---|---|-----------------|-------------------------|-------------------------|
| Base materials  | Bulk<br>density<br>class<br>p<br>[kg/dm³] | minimum<br>compressive<br>strength<br>f <sub>b</sub><br>[N/mm²] | General<br>remarks  | Drill<br>method | N <sub>Rk</sub><br>[kN] | N <sub>Rk</sub><br>[kN] |
| Concrete C12/15 (EN 206-1:2000)   | ≥ 2,25                                    | ≥ 30  |   | hammer          | 0,5                     | 0,75                    |
| Concrete C20/25 -C50/60<br>(EN 206-1:2000)  | ≥ 2,30                                    | ≥ 65  |   | hammer          | 0,75                    | 0,9                     |
| Clay bricks MZ<br>e.g. according to EN 771-1:2011                                     | ≥ 2,0                                     | ≥ 20  |   | hammer          | 0,75                    | 0,9                     |
| Calcium silicate bricks KS e.g. according to EN 771-2:2011                            | ≥ 2,0                                     | ≥ 20  |   | hammer          | 0,6                     | 0,9                     |
| Calcium silicate hollow block KSL e.g. according to EN 771-2:2011                     | ≥ 1,6                                     | ≥ 12  | Vertically<br>perforation<br>more than<br>15 % and<br>less than 50<br>% | hammer          | 0,6                     | 0,9                     |
| Vertically perforated clay bricks HLZ e.g. according to EN 771-1:2011                 | ≥ 1,2                                     | ≥ 12  | Vertically<br>perforation<br>more than<br>15 % and<br>less than 50<br>% | rotary          | 0,6                     | 0,9                     |
| Vertically perforated clay bricks porotherm 25 e.g. according to EN 771-1:2011)       | ≥ 0,8                                     | ≥ 10  | Vertically<br>perforation<br>more than<br>15 %                          | rotary          | 0,4                     | 0,5                     |
| Autoclaved concrete blocks AAC2<br>e.g. according to EN 771-4:2011                    | ≥ 0,35                                    | ≥2  |   | rotary          | 0,5                     | 0,75                    |
| Autoclaved concrete blocks AAC7<br>e.g. according to EN 771-4:2011                    | ≥ 0,65                                    | ≥ 3,5   |   | rotary          | 0,6                     | 0,9                     |
| Lightweight concrete blocks LAC<br>g. according to EN 1520:2011-06 / EN<br>771-3:2011 | ≥ 0,88                                    | ≥ 5   |   | rotary          | 0,6                     | 0,9                     |

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10      |           |
|--|-----------|
| Performances                                     | Annex C 2 |
| Characteristic resistance LTX-10, LMX-10, LGX-10 |           |



|                       | insulation thickness   | point thermal transmittance |
|-----------------------|------------------------|-----------------------------|
| anchor type           | h <sub>D</sub><br>[mm] | χ<br>[W/K]                  |
| LTX-8 surface mount   | 60 - 160               | 0                           |
| LTX-8 immerged mount  | 80 - 160               | 0                           |
| LMX-8 surface mount   | 60 - 260               | 0,004                       |
| LMX-8 immerged mount  | 80 - 260               | 0,002                       |
| LGX-8 surface mount   | 60 - 260               | 0,006                       |
| LGX-8 immerged mount  | 80 - 260               | 0,003                       |
| LTX-10 surface mount  | 30 - 220               | 0,001                       |
| LTX-10 immerged mount | 50 - 220               | 0                           |
| LMX-10 surface mount  | 30 - 260               | 0,004                       |
| LMX-10 immerged mount | 50 - 260               | 0,002                       |
| LGX-10 surface mount  | 30 - 260               | 0,007                       |
| LGX-10 immerged mount | 50 - 260               | 0,003                       |

| anchor type          | diameter<br>of the anchor plate | load resistance<br>of the anchor plate | plate stiffness |
|----------------------|---------------------------------|--|-----------------|
|                      | [mm]                            | [kN]                                   | [kN/mm]         |
| LTX-8/LMX-8/LGX-8    | 60                              | 1,09                                   | 0,5             |
| LTX-10/LMX-10/LGX-10 | 60                              | 1,02                                   | 0,5             |

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10  |           |
|--|-----------|
| Performances                                 | Annex C 3 |
| Point thermal transmittance, plate stiffness |           |

| Base materials<br>(refer Table C1, C2) | Bulk density<br>class<br>p<br>[kg/dm³] | Minimum Compressive strength f <sub>b</sub> [N/mm²] | Tension load<br>N<br>[kN] |        | Displacements <sup>8</sup> (N) [mm] |        |
|--|--|---|---------------------------|--------|-------------------------------------|--------|
|  |  |   | LTX-8                     | LTX-10 | LTX-8                               | LTX-10 |
| Concrete C20/25                        | ≥ 2,25                                 | ≥ 30  | 0,17                      | 0,17   | 1,5                                 | 1,4    |
| Concrete C50/60                        | ≥ 2,30                                 | ≥ 65  | 0,25                      | 0,25   | 1,5                                 | 1,8    |
| Clay bricks MZ                         | ≥ 2,0                                  | ≥ 20  | 0,25                      | 0,25   | 0,5                                 | 0,6    |
| Calcium silicate bricks KS             | ≥ 2,0                                  | ≥ 20  | 0,25                      | 0,2    | 0,8                                 | 1,1    |
| Calcium silicate hollow block KSL      | ≥ 1,6                                  | ≥ 12  | 0,25                      | 0,2    | 1,0                                 | 1,5    |
| Vertically perforated clay bricks HLZ  | ≥ 1,2                                  | ≥ 12  | 0,2                       | 0,2    | 1,2                                 | 1,4    |
| Perforated clay bricks porotherm 25    | ≥ 0,8                                  | ≥ 10  | 0,13                      | 0,13   | 0,6                                 | 0,5    |
| Autoclaved concrete blocks AAC2        | ≥ 0,35                                 | ≥ 2   | 0,25                      | 0,17   | 0,8                                 | 1,3    |
| Autoclaved concrete blocks AAC7        | ≥ 0,65                                 | ≥ 3,5   | 0,3                       | 0,2    | 1,3                                 | 1,8    |
| Lightweight concrete blocks LAC        | ≥ 0,88                                 | ≥ 5   | 0,2                       | 0,2    | 0,9                                 | 1,5    |

| Base materials<br>(refer Table C1, C2) | Bulk<br>density<br>class<br>P<br>[kg/dm³] | Minimum<br>Compressive<br>strength<br>f <sub>b</sub><br>[N/mm²] | Tension load<br>N<br>[kN] |                   | Displacements<br><sup>δ</sup> (N)<br>[mm] |                   |
|--|---|---|---------------------------|-------------------|---|-------------------|
|  |   |   | LMX-8/<br>LGX-8           | LMX-10/<br>LGX-10 | LMX-8/<br>LGX-8                           | LMX-10/<br>LGX-10 |
| Concrete C20/25                        | ≥ 2,25                                    | ≥ 30  | 0,17                      | 0,25              | 2,1                                       | 1,3               |
| Concrete C50/60                        | ≥ 2,30                                    | ≥ 65  | 0,25                      | 0,3               | 2,4                                       | 1,5               |
| Clay bricks MZ                         | ≥ 2,0                                     | ≥ 20  | 0,25                      | 0,3               | 2,0                                       | 0,8               |
| Calcium silicate bricks KS             | ≥ 2,0                                     | ≥ 20  | 0,25                      | 0,3               | 0,7                                       | 1,0               |
| Calcium silicate hollow block KSL      | ≥ 1,6                                     | ≥ 12  | 0,25                      | 0,3               | 1,0                                       | 1,3               |
| Vertically perforated clay bricks HLZ  | ≥ 1,2                                     | ≥ 12  | 0,2                       | 0,3               | 1,6                                       | 1,7               |
| Perforated clay bricks porotherm 25    | ≥ 0,8                                     | ≥ 10  | 0,13                      | 0,17              | 0,9                                       | 0,8               |
| Autoclaved concrete blocks AAC2        | ≥ 0,35                                    | ≥ 2   | 0,25                      | 0,25              | 2,7                                       | 2,4               |
| Autoclaved concrete blocks AAC7        | ≥ 0,65                                    | ≥ 3,5   | 0,3                       | 0,3               | 2,0                                       | 1,4               |
| Lightweight concrete blocks LAC        | ≥ 0,88                                    | ≥5  | 0,25                      | 0,3               | 1,0                                       | 1,0               |

| LTX-8, LMX-8, LGX-8, LTX-10, LMX-10, LGX-10 |           |
|---|-----------|
| Performances Displacements                  | Annex C 4 |
| Displacements                               |           |

Z50203.16 8.06.04-182/16





#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Substance or mixture name: "ANGRO" POLYMERIC PLASTER

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further important information available.

**Use of the substance / mixture:** For laying of internal and external walls and ceilings.

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer/supplier: ANGRO Ltd.

Sofia, 114 Europe Blvd. +359 2 925 22 39 angro bg@abv.bg

#### Additional information may be obtained from:

**Phone:** +359 2 925 22 39 - 8.00 until 17.30 during office hours

E-mail of the competent person responsible for the SDS: angro\_bg@abv.bg

#### 1.4 Emergency telephone number

+359 2 9154 409 National Toxicological Information Centre, Institute for Emergency Medicine "N.I.Pirogov"

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

Substance / mixture - Mixture

#### 2.1.1. Classification according to Regulation 1272/2008

(CLP) Product not classified as hazardous.

#### 2.2 Label elements

Labelling pursuant to Regulation (EC) 1272/2008 (CLP)

Precautionary statements (CLP)

P102: Keep out of reach of children.

P262: Avoid contact with eyes, skin or clothing

P301 + P310: If ingested, call a TOXICOLOGICAL CENTER/doctor immediately.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P273: Avoid release to the environment.

#### 3.1 Substances

This product contains no health and environmental hazardous substances according to Regulation (EC) 1272/2008 (CLP) for the classification, packaging, labelling of hazardous chemicals and mixtures.





Pursuant to Regulation (EU) 2015/830, issue date: 14.04.2017, version number: 3

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

**First aid in case of inhalation:** Access to fresh air. Seek medical attention for complaints.

First aid in case of skin contact: Rinse the skin with plenty of water and soap.

**First aid in case of eye contact:**. Rinse eyes thoroughly with plenty of water for 15 minutes with eyelid open. Remove contact lenses. Seek immediate medical attention.

**First aid in case of ingestion:** Do NOT induce vomiting. Rinse mouth with water. If you feel unwell, call a toxicology center or doctor. Seek immediate medical attention by displaying the package or label. Protective equipment at work:

- Eve baths
- Protective face masks

#### **SECTION 5: Firetignting measures**

#### 5.1 Extinguishing media

**Suitable extinguishing media:** Water spray, dry powder, foam, carbon dioxide. Larger fires are extinguished with water spray or alkali resistant foam.

#### 5.2 Special hazards arising from the substance or mixture

Acrylate monomers can be separated during thermal decomposition.

#### 5.3 Advice for firefighters

Wear insulating gas mask and firefighter protective clothing. The preparation is not fire hazardous. After water evaporation, the dry residue can feed the fire.

In the event of a fire in the neighbourhood, cool with a cold water jet to avoid pressure build up and ignition of the plastic packaging.

Observe the safety recommendations at work (refer to p.8). Avoid contact with skin and eyes. Wear suitable protective equipment. Do not eat, drink or smoke until cleaning is complete.

#### 6.2 Environmental precautions

Do not allow to penetrate into the environment due to alkaline reaction.

#### 6.3 Methods and material for containment and cleaning up

Small quantities: Collect with inert materials that absorb liquid / sand, soil, etc. absorbents /, scrape and dispose of in a special container. Clean the contaminated area with water. Large quantities: Pump spilled product and clean as indicated above.

Residues: Wash with water

Contaminated water: Collect for proper disposal. Do not discharge into drains without preliminary flocculation and filtration.

#### 6.4 References to other sections

P.8 and P.13





Pursuant to Regulation (EU) 2015/830, issue date: 14.04.2017, version number: 3

#### **SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

Tech. Precautions: General ventilation is sufficient.

Precautionary measures for aerosol and dust formation: Observe the usual precautions for handling the chemical/mixture.

Other precautions: Do not take food or drink. The product may acquire the odor of bacteria after long-term storage.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in closed and dry storage at 1-49 ° C. in tightly sealed original packages.

#### 8.1 Control parameters

Legal grounds: Ordinance No. 13 (30.12.2003) on the Protection of Employees against Risks Related to Exposure to Chemicals at Work (prom. SG, No. 8/2004, amended in SG, No. 71/2006)

#### 8.2 Exposure controls

Appropriate engineering controls: Storage and use sites should be equipment with eyewash.

**Hand protection:** Waterproof gloves from neoprene

**Eve protection:** Protective goggles

kin and body protection: Wear appropriate protective clothing

**Respiratory protection:** no special protection is required. If misted, wear a half-mask respirator for air

purification.

**Hygiene measures:** Wash hands before breaks and after work. Due to the alkaline reaction of the mixture, it is recommended to wear protective gloves and work clothing. Do not eat or drink or smoke during work.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

Appearance: viscous fluid

Odour: Specific pH value: 6,5

Relative density: 1700 kg/m Melting point/freezing point: 0°C

Initial boiling point and boiling range: 100°C under normal atmospheric conditions

Flash point: Non-flammable Evaporation rate: Not applicable

Flammability /solid, gas/: Not applicable

Lower/upper flammability or explosive limits: Not applicable

Vapour pressure at 20°C: Not applicable

Vapour density: <1,0 water Density at 20°C: Not applicable Water solubility: Soluble

Partition coefficient: n-octanol/water: Not applicable

Auto-ignition temperature: Not applicable Decomposition temperature: Not applicable

Oxidising properties: Not applicable





#### **SAFETY DATA SHEET**

Pursuant to Regulation (EU) 2015/830, issue date: 14.04.2017, version number: 3

#### **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

No further information available.

#### 10.2 Chemical stability

No further information available.

#### 10.3 Possibility of hazardous reactions

No hazardous reactions are known.

#### 10.4 Conditions to avoid

May coagulate if frozen (0  $^{\circ}$  C). Avoid temperatures above 170  $^{\circ}$  C as thermal decomposition of the product begins.

#### 10.5 Incompatible materials

No known materials that are incompatible with this product and lead to the formation of hazardous products.

#### 10.6 Hazardous decomposition products

Acrylate monomers can be separated during thermal decomposition.

#### 11.1 Information on toxicological effects

Acute toxicity (oral): Acrylate copolymer emulsion. LD50 rat> 5000mg/kg.

Acute toxicity (dermal): LD50 rabbit> 5000mg/kg Inhalation: Unlikely to be hazardous if inhaled. Ingestion: Unlikely to be hazardous if ingested.

**Skin contact:** Prolonged and intense skin contact can cause irritation. Bonding of the skin product may

cause irritation on drying.

**Eye contact:** May cause slight temporary eye irritation. **Sensitisation to the respiratory tract or skin:** Not classified

12.1 Toxicity: No further information available.

#### 12.2 Persistence and degradability:

- biodegradation ability no further information available
- physico-chemical displacement no further information available
- 12.3. Bioaccumulative potential: No further information available.
- **12.4.** *Mobility in soil:* No further information available.
- 12.5. Results of PBT and vPvB assessment: No further information available.
- **12.6.** Other adverse effects: do not allow undiluted product or large quantities of it to enter the environment, water sources and / or drainage without prior treatment. According to the current level of knowledge, no negative environmental impacts should be expected.





#### **SAFETY DATA SHEET**

Pursuant to Regulation (EU) 2015/830, issue date: 14.04.2017, version number: 3

#### **SECTION 13: Disposal considerations**

Any residues of the product, waste from its application and the corresponding packaging in which it was stored should be disposed of in accordance with local regulations for the treatment of special and hazardous waste.

#### 13.1 Waste treatment methods

Classification of waste from the product and packaging in accordance with the Ordinance on the classification of waste (promulgated SG, issue 44 of 25.05.2004)

In compliance with local regulations, in solidified state in smaller quantities, the mixture can be disposed of with domestic waste, otherwise it is treated as mixed construction waste.

Waste code according to Ordinance No 2 of 23.07.2014 on the Classification of waste:

**17 09 04 –** Mixed construction waste that is free from hazardous substances

Empty packaging, once optimally emptied, can be recycled after proper cleaning.

- 14.1 UN number ADR, ADN, IMDG, IATA, RID: Not applicable
- **14.2 UN proper shipping name** ADR, ADN, IMDG, IATA, RID: Not applicable
- **14.3 Transport hazard class(es)** ADR, ADN, IMDG, IATA, RID: Not applicable
- **14.4 Packing group** ADR, ADN, IMDG, IATA, RID: Not applicable
- **14.5 Environmental hazards –** ADR, ADN, IMDG, IATA, RID: Not applicable
- 14.6 Special precautions for user: Not applicable
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable
- The product does not contain persistent organic pollutants according to Regulation /EC/ 850/2004.
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and the related international transport rules.
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures.
- Act on Protection against the Harmful Impact of Chemical Substances and Mixtures (SG, No. 95, 24.11.2006/.
- Ordinance on the Procedure and Methods for Classification, Packaging and Labelling of Chemical Substances and Mixtures.
- -Ordinance No. 13 on the Protection of Employees against Risks Related to Exposure to Chemicals at Work.
- Ordinance No. 14 on the Norms of the Permissible Limit Concentrations of Harmful Substances in the Atmospheric Air of Settlements.
- European Agreement concerning the International Carriage of Dangerous Goods by Road, ADR.



SAAN GERDET

Pursuant to Regulation (EU) 2015/830, issue date: 14.04.2017, version number: 3

- Regulation concerning the International Carriage of Dangerous Goods by Rail, RID

Data are based on our current level of knowledge, but they do not constitute a warranty about the product properties and do not create binding contractual relations.

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Substance or mixture name: "ANGRO GROUND FOR PLASTER"

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further important information available.

**Use of the substance / mixture:** Used for priming before application of polymeric, silicone plasters, light mineral plasters.

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer/supplier: ANGRO Ltd.

Sofia, 114 Europe Blvd. +359 2 925 22 39 angro\_bg@abv.bg

#### Additional information may be obtained from:

**Phone:** +359 2 925 22 39 - 8.00 until 17.30 during office hours

E-mail of the competent person responsible for the SDS: angro\_bg@abv.bg

#### 1.4 Emergency telephone number

+359 2 9154 409 National Toxicological Information Centre, Institute for Emergency Medicine "N.I.Pirogov"

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Not classified

#### 2.2 Label elements

Labelling pursuant to Regulation (EC) 1272/2008 (CLP)

#### **Precautionary statements (CLP)**

Hazard Statements (H – codes): None

Precautionary statements (P – codes):

P101 - If medical attention is needed, carry the package or label of the product

P102: Keep out of reach of children.

P262 - Avoid contact with eves, skin or clothing

P301+P310 – IF INGESTED: Immediately call a POISON CENTER or doctor/physician.

P304+P312: IF INHALED: If you feel unwell, call a POISON CENTER or doctor/physician.

P305+P351+P313 IF IN EYES: Rinse cautiously with water for several minutes. Seek medical advice/assistance.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P410 - Keep away from direct sunlight.

P401 - Do not store above + 5 ° C.

#### 2.3 Other hazards

No further information available.

BG 1 | Page

#### **SECTION 3: Composition/information on ingredients**

#### 3.1 Substances

Not applicable

#### 3.2 Mixtures

This product contains no health or environmental hazardous substances according to Regulation (EC) No 1272/2008 for the classification, packaging, labelling of dangerous chemicals and mixtures.

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

First aid in case of inhalation: Move the exposed individual to fresh air and leave them in a position

facilitating breathing.

First aid in case of skin contact: Wash skin with plenty of water.

**First aid in case of eye contact:** Rinse eyes with water as a precautionary measure. **First aid in case of ingestion:** If you feel unwell, call a toxicology center or doctor.

#### 4.2 Most important symptoms and effects, both acute and delayed

No further information available

#### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Anano anoono i on i easten is non combastible and non captosive

#### 5.1 Extinguishing media

Suitable extinguishing media: spray water, dry powder, foam.

#### 5.2 Special hazards arising from the substance or mixture

Toxic vapours may be released

#### 5.3 Advice for firefighters

Fire-fighting protection: suitable protective equipment, self-contained and self-contained breathing apparatus. Full body protection.

#### 6.1 Personal precautions, protective equipment and emergency procedures

NOT HOUSE SHIP

#### 6.2 Environmental precautions

Do not allow to enter the environment.

#### 6.3 Methods and material for containment and cleaning up

Collect the spilled liquid with absorbent material and dispose of residues in a designated place.

#### 6.4 References to other sections

BG 2 | Page



For information on safe handling, see Chapter 7.

See Chapter 8 for information on personal protective equipment.

See Chapter 13 for disposal information.

#### 3 3

#### 7.1 Precautions for safe handling

Ensure good ventilation at work. Wear personal protective equipment.

Do not eat, drink or smoke when using the product. Always wash your hands after handling the product.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place and keep cool - at temperatures from +50C to +400C.

#### 7.3 Specific end use(s)

No further information available

#### 8.1 Control parameters

No further information available

#### 8.2 Exposure controls

**Appropriate engineering controls:** Ensure good ventilation at work.

**Hand protection:** Protective gloves **Eye protection:** Protective goggles

Skin and body protection: Wear appropriate protective clothing

**Respiratory protection:** In case of insufficient ventilation, use an appropriate breathing apparatus.

**Environmental exposure controls:** Avoid release to the environment.

Appearance: liquid Colour: white Odour: specific pH value: 7,4

Odour limit: no available information

Relative evaporation rate: no available information

Melting point: 0°C Freezing point: not: 0°C

Initial boiling point and boiling range: 100°C

Flash point: no available information

Auto-ignition temperature: no available information Decomposition temperature: no available information

Flammability /solid, gas/: Not applicable Vapour pressure: no available information Relative density: no available information

Density: 1,62 g/cm3 Vapour density: <1,0 water Water solubility: soluble

Viscosity, kinematic: no available information

BG 3 | Page

Viscosity, dynamic: no available information Explosive properties: no available information Oxidising properties: no available information

Lower/upper flammability or explosive limits: no available information

#### 10.1 Reactivity

The product is non-reactive under normal conditions.

#### 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

No hazardous reactions are known.

#### 10.4 Conditions to avoid

No recommended conditions

#### 10.5 Incompatible materials

No further information available

#### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

#### 11.1 Information on toxicological effects

Acute toxicity (oral): Not classified

Eye IIIItation: Not classified

Sensitisation to the respiratory tract or skin: Not classified

Aspiration hazard: Not classified

- **12.1 Toxicity:** The product is not considered to be harmful to aquatic organisms.
- 12.2 Persistence and degradability: No further information available

#### 12.3. Bioaccumulative potential: No further information available

- **12.4.** *Mobility in soil*: No further information available
- 12.5. Results of PBT and vPvB assessment: No further information available
- 12.6. Other adverse effects: No further information available

#### 13.1 Waste treatment methods

Dispose of in accordance with the sorting instructions of the licensed waste disposal service. Waste code according to Ordinance No 2 of 23.07.2014 on the Classification of waste:

**BG 4 | Page** 



**08 01 20 -** agueous suspensions of paints other than those mentioned in 08 01 19

Code packaging waste:

15 01 02 - plastic packaging.

#### SECTION 14: Transport Information

- 14.1 UN number ADR, ADN, IMDG, IATA, RID: Not applicable
- **14.2 UN proper shipping name** ADR, ADN, IMDG, IATA, RID: Not applicable
- **14.3 Transport hazard class(es)** ADR, ADN, IMDG, IATA, RID: Not applicable
- 14.4 Packing group ADR, ADN, IMDG, IATA, RID: Not applicable
- 14.5 Environmental hazards ADR, ADN, IMDG, IATA, RID: Not applicable
- 14.6 Special precautions for user: Not applicable
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

#### SECTION 13. Regulatory illiorillation

#### 13.1 Substance or mixture specific sajety, neatin and environmental regulations or tegislation.

#### Labeling in accordance with Regulation (EC) No 1272/2008 - CLP

The preparation is classified and labeled according to the regulation on classification, labeling and packaging [CLP]

Hazard pictogram - No longer required

**Signal word** - No longer required

Hazardous Labeling Components - No longer required

Hazard statements (H codes): None.

#### **Precautionary statements (CLP)**

Precautionary statements (P – codes):

P101 - If medical attention is needed, carry the package or label of the product

P102: Keep out of reach of children.

P262 - Avoid contact with eyes, skin or clothing

P301+P310 – IF INGESTED: Immediately call a POISON CENTER or doctor/physician.

P304+P312: IF INHALED: If you feel unwell, call a POISON CENTER or doctor/physician.

P305+P351+P313 IF IN EYES: Rinse cautiously with water for several minutes. Seek medical advice/assistance.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P410 - Keep away from direct sunlight.

P401 - Do not store above + 5 ° C.

15.2 Chemical or mixture safety assessment: A chemical safety assessment has not been carried out

properties and do not create binding contractual relations.

BG 5 | Page