

# UNIVERSAL-ABDICHTUNG



UNIVERSAL-ABDICHTUNG is a two-component composite waterproofing used before tiling work for new construction and renovation. The improved, DIN-compliant formula is particularly easy to use. Application creates a waterproof, flexible and crack-bridging layer. Apply before tile bonding with flexible LUGATO adhesives.

## Product performance

- | Two-component flexible composite waterproofing for new construction and renovation.
- | Versatile use, e.g. for showers, balconies, house plinths or decorative ponds.
- | Particularly easy to handle: the components are pre-packed in the correct mixing ratio.
- | Can be brushed on with a brush or smoothed on with a trowel/sponge rubber board.
- | Forms a waterproof, flexible and crack-bridging layer.
- | Very low emission<sup>PLUS</sup> (EMICODE EC 1<sup>PLUS</sup>).
- | Solvent-free and frost-resistant.

Suitable tile adhesives: SICHERHEITSKLEBER FLEXIBEL, SICHERHEITSKLEBER FLEXIBEL PLUS, SICHERHEITSKLEBER SCHNELL + FLEXIBEL, GROSSFORMAT-KLEBER WAND & BODEN, GLASMOSAİK-KLEBER.

Suitable system components for corner joints and pipe penetrations: LUGATO DICHTUNGSBAND, DICHTUNGSMANSCHETTE along with INNEN- and AUSSENECKE.

## Application

For sealing before tile work in/on:

1. Balconies, patios, loggias and arcades.
2. Bathrooms, shower areas, washrooms, WC facilities.
3. Perimeters of swimming pools and showers.
4. Wall and floor tile coverings.
5. Swimming pools.
6. Floor level showers.

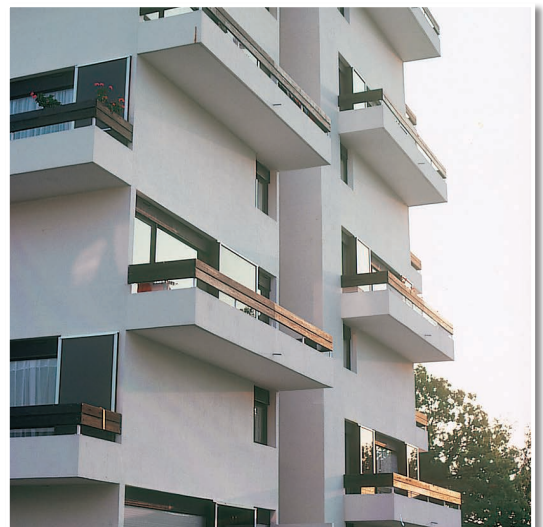
For waterproofing without tiling:

7. Water pools, e.g. ornamental ponds and service water cisterns.
8. Splash water areas on house plinths.

As bonding agent:

9. Glue as a bonding bridge during "tile on tile" gluing.

On walls and floors. Indoor and outdoor use.



UNIVERSAL-ABDICHTUNG: protects and preserves the valuable building substance.

## Substrates and preparation

<b>The following applies to all substrates</b>	Sufficiently hardened, dry (ready for covering), even, load-bearing, homogeneous, solid, deformation-free. Free of cracks, imperfections, cavities, coarse material pores, burrs and sharp-edged corners. Clean, i.e.: free of separating substances, e.g. dust, bitumen, oils, fats, waxes, impregnations, care and separating agents. Free of separating layers, e.g. binding skin, sintered layers, smooth coats, paints, sealer, wallpaper and paste. If necessary, a drainage slope of at least 2 % should be arranged on water-loaded floor areas.
<b>Preparation</b>	Fill in raw masonry. If necessary, create gradient layers. Close break-outs, holes and flaws, push out or grind burrs. Bevel edges. Close coarse pores with UNIVERSAL-ABDICHTUNG by applying a scratch coat. Roughen surfaces with a smooth coat, e.g. by milling. Shorten edge insulation strips protruding from the sealing level to make them flush with the surface. If insulation strip is missing, check joint space for foreign bodies and remove if necessary.

## Suitable substrates

Substrate	Requirements/Preparation	Prime with BESTE BASIS	Suitability of the substrate for the water exposure classes*			
			W0-I W1-I	W2-I W3-I	Balconies Loggias	W1-B W4-E
<b>Gypsum-bound LUGATO products</b>	manufactured according to processing instructions.	+	X			
<b>Cement-bound LUGATO products</b>	manufactured according to processing instructions.		X	X	X	X
<b>Anhydrite screeds Anhydrite heating screeds</b>	sufficiently hardened, ready for covering, residual humidity < 0.5 CM %. This is usually the case about 4 weeks after production. Assessment aid for time space: <a href="http://anhydrit.de/de/service-centre/planning-aids/drying-calculator/">http://anhydrit.de/de/service-centre/planning-aids/drying-calculator/</a> , ground, vacuumed. Heating Switch off 1 day before installation (in winter operation supply temperature 25 °C). Do not heat up until 7 days after gluing/jointing.	+	X			
<b>Concrete</b>	at least 3 months old.		X	X	X	X
<b>Tiles</b>	no damaged, flush grouted, without hollow layers.		X	X	X	
<b>Cement-bonded wall panels</b>	fastened according to manufacturer's instructions.		X	X		
<b>Gypsum fibreboards</b>	fastened according to manufacturer's instructions.	+	X			
<b>Gypsum boards</b>	fastened according to manufacturer's instructions.	+	X			
<b>Gypsum plaster/ spatula</b>	observe minimum layer thicknesses for tiling.	+	X			
<b>Gypsum wallboards</b>	created according to the manufacturer's specifications.	+	X			

## Suitable substrates (continuation)

Substrate	Requirements/Preparation	Prime with BESTE BASIS	Suitability of the substrate for the water exposure classes*			
			W0-I W1-I	W2-I W3-I	Balconies Loggias	W1-B W4-E
<b>Rigid foam sheets, mortar-laminated</b>	fastened according to manufacturer's instructions.		X	X		
<b>Lightweight concrete</b>	sufficiently hardened, ready for covering depending on manufacturer's specifications.		X	X		
<b>Masonry</b>	ready for follow-up work, usually at least 14 days old. Filled with ROHBAU-SPACHTEL AUSSEN.		X	X	X	Only W4-E
<b>Concrete formwork blocks</b>	reinforced and filled with concrete. Filled with ROHBAUSPACHTEL AUSSEN.	+	X	X	X	X
<b>Dry screeds</b>	installed based on manufacturer's instructions.	+	X			
<b>Terrazzo, concrete block</b>	milled off, vacuumed off.	+	X	X	X	
<b>Lime cement plasters</b>	minimum layer thickness 10 mm, sufficiently hardened, at least 14 days old, not smoothed.		X	X	X	
<b>Cement screeds, Cement heating screeds</b>	sufficiently hardened, ready for covering, residual humidity $\leq 2.0$ CM % (with heated screed 1.8 CM %), this is usually approx. 4 weeks after manufacture, assessment aid for the time period: <a href="http://anhydrit.de/de/service-center/planungshilfen/trocknungsrechner/Switch%20off%20heating">http://anhydrit.de/de/service-center/planungshilfen/trocknungsrechner/Switch off heating</a> 1 day before sealing (in winter operation supply flow temperature 25 °C). Do not heat up until 7 days after gluing/jointing.		X	X	X	Only cement screed
<b>Cement plaster</b>	minimum layer thickness 10 mm, sufficiently hardened, at least 14 days old, not smoothed.		X	X	X	Only W1-B

### Key:

+ BESTE BASIS required.

x UNIVERSAL-ABDICHTUNG/Substrate suitable for this moisture stress class or suitable after preparation.

\* Note professional info from page 6.

## Processing instructions



Add 3.2 kg Flex additive to mixing vessel (e.g. packaging bucket). Stir in 3.8 kg sealing mortar homogeneously and lump-free with slow-running electric agitator.



Apply UNIVERSAL-ABDICHTUNG to the area to be sealed, insert system component (e.g. sealing tape) directly and align immediately. Press lightly with a suitable tool and embed without bubbles or creases. Joint areas should overlap at least 5 cm. Follow the processing instructions for the system components.



Apply the first coat of UNIVERSAL SEALING evenly thickly with a suitable tool (e.g. brush, jointing board and trowel) (layer thickness per layer 1 mm–1.25 mm). Rework the built-in components opaque. Allow to dry for at least 2 hours.



Apply the second coat after drying (mixing ratio see Point 1). Allow the 2nd layer to dry for 2 hours before gluing the tiles. At the same time, protect from moisture.



Glue tiles with approved adhesive, e.g. SICHERHEITSKLEBER FLEXIBEL, SICHERHEITSKLEBER FLEXIBEL PLUS or GROSSFORMATKLEBER Wand & Boden.

## Supplementary processing information

### When using in pools, ornamental ponds and service water cisterns with and without tiling:

The structure of the waterproofing layer in the underwater area is as described above, but in 3 layers.

### When using in pools, ornamental ponds and service water cisterns without tiling and system components:

Provide sharp-edged inner corners in advance, e.g. transition wall/floor, with a fillet. Break outer corners by milling. Apply UNIVERSAL-ABDICHTUNG as described above in 3 layers over the entire surface.

- The pool waterproofing must be installed at least 15 cm above the highest planned water level or planned in such a way as to prevent the waterproofing from back-flowing.
- The minimum waiting time for water filling is 7 days after completion of the waterproofing.

### For use as house plinth waterproofing

The sealing must be applied in 2 layers as described above.

- The plinth sealing level must be 30 cm above the upper edge of the ground and 20 cm below the upper edge of the ground. If necessary, the exterior cellar wall waterproofing should overlap the plinth waterproofing by at least 10 cm.
- The minimum waiting time for filling with soil is 24 hours. Surface protection is recommended before filling, e.g. by placing a dimpled drainage sheet.

### When used as an adhesive bridge:

UNIVERSAL-ABDICHTUNG only a single layer of application as an adhesive bridge without sealing function.

### Special instructions:

Supplementary information on application can be found in the "Guidelines for the Planning and Execution of Waterproofing of Building Components with Mineral Waterproofing Slurries" issued by DEUTSCHE BAUCHEMIE.

The instructions in the hazardous material field as well as in the general building supervisory test certificate (abP) for this building material must also be heeded.

## Supplementary processing instructions (continuation)

### Purchase list for waterproofing with tiles:

- | DICHTUNGSBAND, DICHTUNGSMANSCHETTE, INNENECKEN or AUSSENECKEN
- | SICHERHEITSKLEBER FLEXIBEL or SICHERHEITSKLEBER FLEXIBEL PLUS or SICHERHEITSKLEBER SCHNELL + FLEXIBEL or GROSSFORMAT-KLEBER Wand & Boden
- | UNIVERSAL-FUGE FLEXIBEL
- | WETTERSCHUTZ-SILICON or BAD-SILICON WIE GUMMI

## Product data

Applications as per Page 1	Layer thickness	Quantity required	Yield from 14 kg UNIVERSAL-ABDICHTUNG
1–4, 6, 8	2 mm (2 x 1 mm)	approx. 2.8 kg/m <sup>2</sup>	approx. 5 m <sup>2</sup>
5, 7	3 mm (3 x 1 mm)	approx. 4.2 kg/m <sup>2</sup>	approx. 3 m <sup>2</sup>
9	1 mm	approx. 1.4 kg/m <sup>2</sup>	approx. 10 m <sup>2</sup>

<b>Product type</b>	(DIN E 14891) CM 01.
<b>Processing time (pot life)</b>	approx. 1 hour.
<b>Processing temperature</b>	5–25 °C.
<b>Temperature resistance</b>	up to 80 °C.
<b>Crack bridging</b>	up to 0.75 mm, ideal for substrates up to Crack Class R2-I/E/B.
<b>Ingredients</b>	<b>Sealing mortar:</b> Cement, fillers, organic additives. <b>Flex additive:</b> Synthetic resin dispersion, organic additives, and preservatives.
<b>Ecology</b>	solvent-free. GISCODE ZP1/D1. Very low emission <sup>PLUS</sup> (EMICODE EC 1 <sup>PLUSR</sup> ).
<b>Pack sizes</b>	large picture plastic bucket 14 kg (2 x 3.8 kg sealing mortar, 2 x 3.2 kg flex additive).
<b>Shelf life</b>	shelf life 12 months in original packaging. Store frost-free and dry.

All times based on 20 °C and 65 % rel. humidity. Higher temperatures accelerate and lower temperature decelerate the curing process.

## Please note

- | For waterproofing on balconies and terraces, in particular above inhabited rooms, follow the instructions in “Profi-Info Balcony Waterproofing” (in the DIY store, in the building materials trade, on the LUGATO homepage) and the ZDB leaflet “Flooring constructions with tiles and slabs on outside of buildings”. Approved for moisture classes A and B. Not suitable as a walkable wear layer. Recycle packaging free of residues.
- | The statements made in this information sheet reflect our current knowledge and level of experience. Since we do not have influence on the object-specific circumstances and the correct execution of the work, we can only guarantee the consistent quality of our products. For that reason in case of doubt verify the suitability of the product through a sufficient number of test applications. A direct legal liability can be derived neither alone from the instructions in this information sheet nor from any oral consultation. The publication of this information sheet invalidates the previous editions.
- | Professional info comply with water action class from page 6.
- | Test certificates:  
General building regulations test certificate of the MPA North Rhine-Westphalia P-22-MPANRW-12989-1-19-1. Mineral, flexible dual component sealing compound for seals in combination with tiles and slab coverings part 1: Sealing materials to be processed in liquid form (PG-AIV-F).  
General building regulations test certificate of the MPA North Rhine-Westphalia P-22-MPANRW-12990-19. Sealing system mineral, flexible dual component sealing compound for waterproofing buildings.

**Please note (continuation)**

**Arbeitssicherheit:**



Hazard

**DICHTMÖRTEL**

Contains Portland cement. Causes skin irritation. Causes serious eye damage. If medical advice is needed, have product container or label at hand. Keep out of reach of children. Wear protective gloves/protective clothing/eye protection/face protection. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Avoid dust formation and mortar splashes. Shows strong alkaline reactions when exposed to water.




Hazard

**FLEX-ZUSATZ**

Contains 2-Methyl-2H-isothiazol-3-on. Causes skin irritations. Contains 1,2-Benzisothiazol-3(2H)-on. May produce an allergic reaction. If medical advice is needed, have product container or label at hand. Keep out of reach of children. Wear protective gloves/protective clothing/eye protection/face protection. Dispose of contents/container to **local and national regulations for disposal**.

A data sheet can be downloaded from the Internet at [www.lugato.de](http://www.lugato.de).

 19	
<b>LUGATO GmbH &amp; Co. KG</b> Großer Kamp 1, D-22885 Barsbüttel 1655	
EN 14891:2012 0370 UNIVERSAL-ABDICHTUNG Flüssig zu verarbeitendes wasserundurchlässiges Zementprodukt mit verbessertem Rissüberbrückungs- vermögen bei niedrigen Temperaturen *(20°C) und beständig gegen Kontakt mit Chlorwasser. Unter keramischen Fliesen und Platten für Wand und Boden im Außenbereich und im Schwimmbecken. EN 14891:CM 02P	
Rissüberbrückung bei niedrigen Temperaturen	≥ 0,75 mm
Anfangshaftzugfestigkeit	≥ 0,5 N/mm <sup>2</sup>
Haftzugfestigkeit nach Kontakt mit Wasser:	≥ 0,5 N/mm <sup>2</sup>
Haftzugfestigkeit nach Wär- mealterung:	≥ 0,5 N/mm <sup>2</sup>
Haftzugfestigkeit nach Frost-/ Tauwechselbeanspruchung	≥ 0,5 N/mm <sup>2</sup>
Wasserundurchlässigkeit:	Wasserundurch- lässigkeit und ≤ 20 g Massenzu- nahme
Haftzugfestigkeit nach Kontakt mit Chlorwasser:	≥ 0,5 N/mm <sup>2</sup>
Freisetzung gefährlicher Stoffe	s. Sicherheitsda- tenblatt

## Professional info water exposure classes

When using UNIVERSAL-ABDICHTUNG as described above, the substrates are securely sealed.

For secure application it is recommended to observe existing application rules (standards or data sheets).

Depending on the water load, some substrates are excluded from use in areas to be sealed.  
(See table for suitable substrates).

Water pollution is divided into so-called water exposure classes.

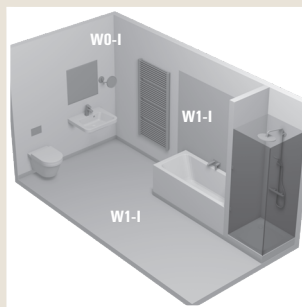
The following water exposure classes are defined in DIN 18534 (interior waterproofing):

W0-I, W1-I, W2-I and W3-I (after increasing water accumulation).

These cover the following situations:

### Water exposure class: W0-I

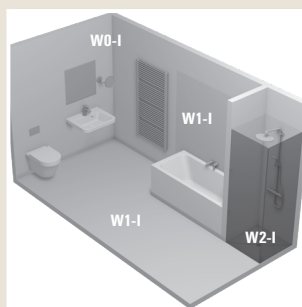
- | Wall surfaces in bathrooms outside shower areas and domestic kitchens.
- | Floor surfaces in domestic areas without drain, e.g. in kitchens, utility rooms, guest toilets.



Domestic bathroom with bathtub and shower tray and shower partition.

### Water exposure class: W1-I

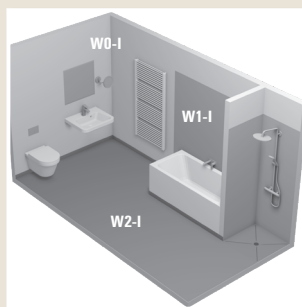
- | Wall surfaces in bathrooms above bathtubs and shower trays.
- | Floor surfaces in bathrooms without/with drain without high water exposure from the shower area.
- | Floor areas in the domestic area with drain.



Domestic bathroom with bathtub and floor-level shower and shower enclosure.

### Water exposure class: W2-I

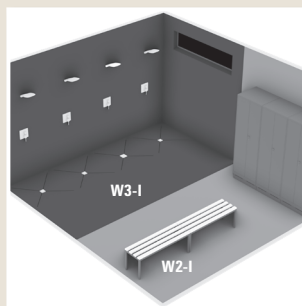
- | Floor areas with drains and/or gutters.
- | Floor areas in rooms with floor-level showers without shower partitioning.
- | Wall and floor surfaces of sports and industrial sites.



Domestic bathroom with bathtub and floor-level shower without shower enclosure.

### Water exposure class: W3-I

- | Showers/shower facilities in sports/commercial facilities.
- | Surfaces in commercial premises (commercial kitchens, laundries, breweries, etc.).
- | Surfaces in the vicinity of swimming pool surrounds.



Communal showers.

Please note: The transition between floor and wall must be designed so that it cannot backflow, and the sealing tape must also be installed and painted over in places where the wall is not sealed.

Areas under/behind bathtubs or shower trays must be protected from the effects of water. For that reason, continue the sealing under/behind the basins.

On water-loaded wall surfaces, the sealing layer must be at least 20 cm above the water intake point or the height and width of the expected splash water area.

## Professional info water exposure classes (continuation)

In the area of doors and entrances, the sealing layer must also be raised in the soffits. Existing door frames must be backed with the sealing layer. The frames should therefore only be installed after the waterproofing layer has been applied.

When planning the waterproofing in the area of doors and accesses to water-stressed interiors, the following must be considered:

- ! The location of the shower area or floor drains and drainage channels.
- ! The height of the water-bearing levels and the gradient.
- ! The possibility of water transfer to adjacent rooms.

If a surface slope is planned, it must be directed away from the door area towards the drain. Doors and entrances should be protected against the effects of splash water and service water.

Floor-level shower areas or similarly stressed areas should, for example, not be arranged directly next to doors and entrances without suitable protective measures.

According to **DIN 18535 (Waterproofing of tanks and pools)**, the water exposure class W1-B is defined for basins up to 5 m water depth. This standard also contains identification codes for the location of the basin/pool. UNIVERSAL-ABDICHTUNG can be used for both indoor (S2-B) and outdoor (S1-B) pools.

**DIN 18531 (Waterproofing of roofs, balconies and walkways)** does not differentiate between water exposure classes for waterproofing.

In **DIN 18533 (Waterproofing of elements in contact with soil)**, the sealing of wall bases against splashing water and soil moisture is linked with the water impact classes W4-E.

UNIVERSAL-ABDICHTUNG is designed for moisture classes W1 – W6\* according to Ö-Norm B 3407.

(\* For class W5: no chemical action.)

## If you are not sure of something, please ask!

Feel free to give us a call. You can reach the LUGATO experts at: (040) 6 94 07-222.



Responsible Care (RC) for the chemical industry means taking responsible action. This is made clear through a worldwide initiative. In many countries, chemical associations run national RC programs. In the international initiative, thousands of companies are active with millions of employees. The goal is voluntary commitment to do more than just the compulsory: promoting sustainability, demonstrating product responsibility, creating more safety for factories and the neighbourhood, improving health protection at the workplace and improving environmental protection. Within the scope of its membership in the Association of the German Chemical Industry (Verband der deutschen chemischen Industrie), LUGATO has committed itself to adhere to this objective.

The statements made in this information sheet reflect our current knowledge and level of experience. Since we do not have influence on the object-specific circumstances and the correct execution of the work, we can only guarantee the consistent quality of our products.

For that reason, in case of doubt verify the suitability of the product through a sufficient number of test applications. A direct legal liability can be derived neither alone from the instructions in this information sheet nor from any verbal consultation.

The publication of this technical information sheet invalidates the previous editions. Subject to change without prior notice.



## Seminars

In cooperation with its trading associates, LUGATO is happy to pass on practical knowledge such as how to install tiles. Learn about the current range of handyman seminars at [www.lugato.de](http://www.lugato.de) or at your local dealer.



LUGATO GmbH & Co. KG, 22885 Barsbüttel,  
Technischer Service Tel.: (040) 69 40 7 - 222, [technik@lugato.de](mailto:technik@lugato.de)  
[www.lugato.de](http://www.lugato.de)

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