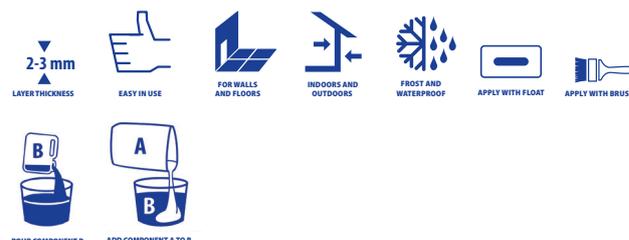




## ATLAS WODER DUO

### two-component waterproofing

- for light, medium and heavy type waterproofing
- for pools, drinking and fire water reservoirs
- beneath ceramic tiles on balconies and terraces
- elastic, reinforced with fibres – obturates scores up to 1 mm wide



### Properties

ATLAS WODER DUO is a two – component material obtained in the process of mixing component A (dry mix of grey colour containing cement, fillers and modifiers) and component B (white emulsion containing synthetic resins and modifiers) in 3:1 weight ratio.

**Watertightness** – minimum 0.7 MPa (equivalent of pressure of 70 m water column) for coating 2.5 mm thick. Ensures complete substrate protection against water under pressure.

**Resistant to negative water pressure** (when pressure acts from side opposite to coating) – min. 0.5 MPa.

**Great bonding to substrate** – min. 1.03 MPa to concrete (standard requires 0.5 MPa), min. 0.7 MPa for ceramic brick.

**Quick setting** – application of subsequent coat possible after 3 hours, application of ceramic cladding just after 12 hours.

**High water vapour permeability** – water vapour diffusion coefficient  $\mu \leq 1,700$  which enables use on damp substrates.

**Chemical resistance** – set mortar is resistant to communal sewage, liquid manure, aggressive groundwater – environmental exposure class XA2.

**High elasticity** – owing to great content of polymers, specially selected fine aggregate fillers and additional structural reinforcement with microfibres, the mortar obturates scores up to 1 mm wide.

**High mechanical resistance** – owing to use of reinforcing fibers and specially selected polymer resins the mortar offers improved resistance to mechanical damage and impacts. Coating is resistant to temporary direct foot traffic loads.

**Frost – resistance** – coating watertightness does not deteriorate during frost.

**Protection of ferroconcrete surface** – 2 mm thick coating gives effective protection of concrete surface against carbonatization and further corrosion of reinforcing steel. The value of  $S_d$  coefficient determined for carbon dioxide is not lower than 70 m.

**Recommended for old, damp buildings** – water vapour permeability combined with watertightness makes the mortar an excellent solution for waterproofing of partitions in heritage buildings.

**Resistant to UV radiation and weathering.**

**Holds Hygienic Attest for contact with drinking water** – allows for safe waterproofing of reservoirs with drinking water.

**Low emission of VOC** – safe for users, does not emit harmful substances.

RESISTANCE OF WODER DUO COATING	
acidified water up to pH 4.5	+
liquid manure	+
gas oil	+
sodium hypochlorite of free chlorine concentration up to 1.0 mg/l	+
aggressive environment of environmental exposure class XA1 and XA2 acc. to PN-EN 206+A1:2016	+

### Use

ATLAS WODER DUO is designed for application of elastic damp- and waterproofing in wet rooms, on terraces, balconies, underground building elements (foundations, cellar walls, etc.), plinth zones, various tanks.

WATERPROOFING TYPE	
light (water flow)	+
medium (standing water)	+
heavy (pressurised water)	+
OBJECT TYPE	
residential housing	+
public access, educational, office, healthcare buildings	+
commercial and service buildings	+
sacral buildings	+
aggressive environment of environmental exposure class XA1 and XA2 acc. to PN-EN 206+A1:2016	+
industrial construction and multi-storey garages	+
industrial warehouses	+
infrastructure	+
SPA objects	+
PLACE OF APPLICATION	
surfaces of low traffic	+
surfaces of moderate traffic	+
surfaces of heavy traffic	+
kitchen, bathroom, laundry, garage (individual housing)	+
terraces	+
balconies, loggia	+
underground building elements – foundations, cellars	+
external slab stairs	+
external beam stairs, e.g. bracket stairs	+
communication routes (except of external stairs)	+
plinth cladding	+
technological tanks, pools, fountains, jacuzzi, balneotechnology (with no aggressive chemicals in use)	+
drinking water tanks	+
liquid manure tanks	+
gas oil tanks	+
communal sewage tanks	+
fire water tanks	+
sauna	+
showers, washes, rooms washed with plenty of water	+

SUBSTRATE TYPE - standard	
cement screeds and floors	+
anhydrite screeds	use ATLAS WODER E or ATLAS WODER W
cement, cement-lime plasters	+
gypsum plasters in damp and wet zones of rooms	use ATLAS WODER E or ATLAS WODER W
walls made of cellular concrete*	+
walls made of silicate brick or hollow blocks*	+
walls made of ceramic brick or hollow blocks*	+
walls made of gypsum blocks*	+

\*plastering is not required for walls with full joints

SUBSTRATE TYPE - difficult	
concrete	+
terrazzo	+
magnesium substrates	+
mastic asphalt screeds	+
dry substrates made of plasterboards	+
screeds (cement and anhydrite) with heating system embedded, water and electric one	+
screeds with heating mats embedded in adhesive	+
plasters with wall heating system	+
plasterboards	+
gypsum-fibre boards	+
cement-fibre boards	+
existing ceramic and stone cladding ("tile on tile")**	+
concrete resin lacquers bonded to the substrate	+
paint coats made of epoxy resins	+
timber floors (thick. > 25 mm)	+
OSB/3 and OSB/4 and chipboards on floors (thick. > 25 mm)	+
OSB/3 and OSB/4 and chipboards on walls (thick. > 18 mm)	+
insulation and acoustic panels	+
metal and steel surfaces	+
plastic surfaces	+

\*\* if bearing capacity confirmed and full joints technology used

USE OF ATLAS WODER DUO AS PROTECTIVE COATING	
posts, downstand beams in ferroconcrete constructions	+
concrete elements of road and train overpasses	+
prefabricated ferroconcrete elements	+

## Technical data

Bulk density of component A	approx. 1.85 g/cm <sup>3</sup>
Density of component B	approx. 1.00 g/cm <sup>3</sup>
Substrate and ambient temperature during application	from +8°C to +30°C
Max. single coat thickness	2 mm
Total thickness of sealing coat	2-3 mm
Watertightness after 28 days, no leakage at pressure from the coating side	0.7 MPa
Watertightness after 28 days, no leakage at pressure from the side opposite to coating (negative water pressure)	0.5 MPa
Bonding to concrete substrate	≥ 0.9 MPa
Bonding to solid brick, steel substrate	≥ 0.6 MPa
Bonding to plasterboard substrate	≥ 0.5 MPa
Relative elongation at maximum tensile force (coating without inserts approx. 23°C)	≥ 20 %

Water vapour diffusion coefficient $\mu$	≤ 1,700
CO <sub>2</sub> permeability determined by $S_d$	≥ 70 m
Pot life after components mixing*	approx. 1 hour
Open time*	min. 30 minutes
Second coat application*	after approx. 3 h
Fixing the tiles*	after approx. 12 h
Burial of trenches*	after approx. 72 h
Loading with pressurized water*	after approx. 7 days

\*The time shown in the table is recommended for the application in temperature 20°C and humidity 50% (approx.).

## Technical requirements

The product conforms to PN-EN 14891:2012 standard. EC Declaration of Performance No 096/CPR.

 1487	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
<b>Two-component, polymer-modified watertight cement product used in liquid form, resistant to chlorinate water (CM P), for outdoor use and in pools under ceramic tiles fixed with C2 adhesives (acc. to EN 12004 standard)</b>	
<b>Bonding strength</b> - initial bonding	≥ 0.5 N/mm <sup>2</sup>
<b>Durability - bonding:</b> - after immersion in water - after thermal ageing - after freeze-thaw cycles - after lime water action - after chlorinate water action	≥ 0.5 N/mm <sup>2</sup>
Watertightness	no penetration
Crack-bridging ability in standard conditions	1 mm
Release/content of hazardous substances	See: Safety Data Sheet

The product has been given the Hygienic Certificate for contact with drinking water.

## Waterproofing

### Substrate preparation

The substrate should be:

- **even and sound** – i.e. strong, stable and free from dust, dirt, salt efflorescence and poorly bonded substrate elements, residues of old paints, oils, bitumen coatings and other substances which may impair the waterproofing bonding. Any stable substrate scratches wider than 1.0 mm and gaps must be mechanically widened and filled with cement mortar, e.g. ATLAS TEN-10 or ATLAS MONTER-T-5. Dusty substrates must be grinded and dedusted.
- **stabilized** – freshly applied surfaces, e.g. plasters or floors can be waterproofed after appropriate stabilization, not earlier however, than 14 days since their application.
- **dry** – free from technological dampness or capillary action from the ground, dried after precipitation, flooding, etc. Just before mass application dry substrate should be moistened until matt-wet state (leave no puddles).
- **primed** – initially intensively moistened and matt-wet during application. Excessively absorptive or dusty substrates should be primed with ATLAS UNI-GRUNT emulsion, smooth or poorly absorbable ones should be coated with ATLAS GRUNTO-PLAST mass.

Detailed guidelines concerning the substrate preparation, depending on its type.

Substrate type	Preparation
Freshly applied cement screeds ATLAS POSTAR 80, ATLAS SMS 15 or ATLAS SMS 30	Stabilized min. 24 hours; optimum moisture content < 4% by weight.
Freshly applied cement screeds ATLAS POSTAR 20	Stabilized min. 2 days; optimum moisture content < 4% by weight.
Other cement screeds	Stabilized min. 28 days; optimum moisture content < 4% by weight. Prime with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS.
Cement and anhydrite screeds on floor heating	Appropriately heated and primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS.
Terrazzo	De-grease the surface thoroughly, in case of waxed terrazzo remove the top layer or whole layer and execute a new one.
Walls made of silicate or ceramic bricks and hollow blocks, cellular concrete	Leveling coat required (plaster). Direct fixing onto rough wall is possible in case of appropriate substrate dimensional tolerance. In such case it is necessary to execute full joint wall (or re-fill the joints) and repair any gaps or irregularities with ready-to-use mortars. Prime with ATLAS UNI-GRUNT.
Cement and cement-lime plasters made of ready-made ATLAS mortars	Stabilized min. 3 days* for each 10 mm of thickness; optimum moisture content < 4% by weight.
Other cement and cement-lime plasters	Stabilized min. 7 days*. Prime with ATLAS UNI-GRUNT.
Concrete	Stabilized min. 21 days; optimum moisture content < 4% by weight. Remove residues of formwork oils and other substances which would impair bonding obligatorily. Holes, cracks and other gaps should be filled with ATLAS BETONER system mortars.
OSB boards and wooden floors – the layer composition should be designed and executed in the way excluding the possibility of deformation, which may lead to the cladding damage.	<ul style="list-style-type: none"> <li>- check the boards type, on floors one may use boards OSB/3 and OSB/4 (acc. to PN-EN 300:2007), min. 25 mm thick, on walls – min. 18 mm thick,</li> <li>- check the superstructure stability, boards must not move under operation load; fix additional, stiffening boards layer, if needed,</li> <li>- check the boards type, on floors one may use boards OSB/3 and OSB/4 (acc. to PN-EN 300:2007), min. 25 mm thick, on walls – min. 18 mm thick,</li> <li>- check the superstructure stability, boards must not move under operation load; fix additional, stiffening boards layer, if needed,</li> <li>- matt the surface with 40-60 sand paper,</li> <li>- dedust the surface,</li> <li>- use priming mass ATLAS GRUNTO-PLAST in order to improve bonding, if needed.</li> </ul>
Existing ceramic or stone tiles	<ul style="list-style-type: none"> <li>- check bonding of the existing cladding by tapping; individual loosening tiles must be removed,</li> <li>- clean and de-grease the existing tiles surface,</li> <li>- matt glazed tiles with a diamond grinder,</li> <li>- dedust the surface</li> <li>- prime with ATLAS GRUNTO-PLAST</li> </ul>
Insulation and acoustic panels	In case of panels with base coat reinforced with mesh, substrate preparation is not required.

\*The time shown in the table is recommended for the application in temperature 20°C and humidity 50% (approx.).

## Mass preparation

The product is manufactured as a set consisting of two components: the dry mix (component A) and the emulsion (component B). The components are packed in separate packages constituting a ready to use set of appropriate mixing ratio. The mass preparation consists in pouring the liquid component (B) into an appropriate container, next steady dry mix pouring (A) and concurrent stirring until homogenous mass of uniform consistency and color is formed (approx. 2 minutes). It is advisable to use a low speed mixer with a drill. The mass can be used after approx. 5 minutes and remixing. It should be used up within approx. 60 minutes. Note: if partial use of the product is assumed, prepare the mass by keeping the weight ratio of components (3 parts of dry component A and 1 part of emulsion B).

## Waterproofing

The sealing coat should be applied in minimum two waterproofing coats. The first coat is always applied with a brush by rubbing the mass well into the substrate to close the existing pores. Start the application from points where ATLAS SEALING TAPES, CORNERS, RINGS or ATLAS HYDROBAND accessories are to be used. These accessories are embedded in the freshly applied mass. The tape should overlap with min. 5 cm. It is advisable to apply waterproofing both on substrate and tape backside. Excessive amount of mass should be pressed out with a trowel or a float. Depending on needs, in order to obtain proper consistency, 3% of water can be added to the mixed mass for application of the first coat. The second coat can be applied with a brush, a roller or a float once the first coat dries completely (after approx. 3-4 hours). Same technological breaks must be kept in case of application of subsequent coats. Keep the same thickness of each individual coat – this ensures optimum conditions of waterproofing use. Caution: It is not recommended to apply a single coat greater than 3.0 kg/m<sup>2</sup>. In higher temperature the coat size should not exceed 1.5 kg/m<sup>2</sup>.

## Use of insert

In order to strengthen the waterproofing coat one can use interlining insert of weight 50 g/m<sup>2</sup>. Application of waterproofing with insert should be carried out as follows:

STEP 1. Rub ATLAS WODER DUO into matt-wet substrate with a brush.

STEP 2. After setting, apply ATLAS WODER DUO with a notched trowel 4 mm.

STEP 3. Put interlining into unset mass, press it with a smooth trowel side and ensure uniform and complete filling with mass beneath insert.

STEP 4. Apply subsequent coat of ATLAS WODER DUO. It can be applied in "wet on wet" technology or wet on set previous coat. Use a notched trowel 4 mm and smoothen the surface.

## Machine application

Machine application of waterproofing can be carried out in one or two stages, depending on the designed waterproofing type, i.e. light, medium or heavy one. Light and medium waterproofing is applied in one cycle with coat up to 2.5 mm thick. Heavy waterproofing is applied in two stages, i.e. the second coat is applied when the first one sets with total waterproofing thickness of 3 mm.

**One stage application** – apply mass on the substrate uniformly so it coats surface completely, keep the coat approx. 2.5 mm thick. Just after application, smoothen fresh mortar with a smooth trowel or a feather edge, so an uniform coat is formed.

**Two stage application** – apply mass on the substrate uniformly so it coats surface completely, keep the coat approx. 1.5 mm thick. When it sets, apply the second coat similarly. Just after application, smoothen fresh mortar with a smooth trowel or a feather edge, so an uniform smooth coat is formed. The total waterproofing thickness should be min. 3 mm. Leave to dry completely.

Recommended unit: Plastering unit WAGNER PC 1030. Nozzle: 6 mm. Speed: 3 on 10-point scale. Pressure: 8 bar.

## Finishing works

The waterproofed surfaces must be protected against precipitation and free water action within approx. 12 hours and within 7 days against pressurized water action. The set coating must be covered with ceramic cladding (after approx. 12 hours).

CLASS OF ADHESIVES DEPENDING ON PLACE OF WATERPROOFING	
Indoors: bathrooms, kitchens, plumbing, etc.	C2 (ATLAS ELASTYK, ATLAS GEOFLEX, ATLAS GEOFLEX WHITE)
Outdoors: balconies, terraces, pool basin, fountain, etc.	C2 S1 (line ATLAS PLUS, ATLAS ULTRA GEOFLEX)

## Consumption

The total coating thickness must be adjusted respectively to the conditions of water action on the waterproofed surface.

Type of waterproofing	Coating thickness [mm]	Consumption [kg/m <sup>2</sup> ]
light (damp proofing)	2.0	approx. 3.00
medium (ground water)	2.5	approx. 3.75
heavy (pressurised water)	3.0	approx. 4.50
with insert	3.0	approx. 4.50

## Important additional information

- Not treated surfaces should be protected against soiling.
- Low temperature and increased humidity extend the time of mortar setting. Avoid application in strong sunlight.
- Any passages exposed to water under pressure should be protected with twisted ring sealers.
- When waterproofing water tanks it is acceptable to execute coves made of ATLAS TEN-10 or ATLAS FILER in the wall corners.
- The setting product is sensitive to frost. The waterproofed places should be protected during setting against precipitation within min. 12 hours.
- Rooms where ATLAS WODER DUO has been applied should be aired for min. 28 days before use. In case of applications on floors this time can be reduced to 10 days.
- The tools must be cleaned with clean water directly after use. Difficult to remove residues of the set waterproofing can be removed with the ATLAS SZOP and ATLAS SZOP 2000 agents.
- Water reservoirs designated for drinking water should be washed with water after the product stabilization.
- Contains cement. May cause respiratory irritation. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Keep out of reach of children. Avoid breathing dust. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or a rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Follow the instructions of the Safety Data Sheet.
- Components should be transported and stored in tightly sealed packaging, in dry conditions (preferably on pallets). Component B (emulsion) should be transported and stored in positive temperature. Protect against moisture and overheating (above 30 °C). The shelf life (for component A and B) is 12 months from the production date shown on packaging.

## Packaging

Set 32 kg: component A - paper bag 24 kg, component B – plastic drum 8 kg.  
 Set 16 kg in a plastic bucket: component A - paper bags 2 x 6 kg, component B - plastic drums 2 x 2 kg.

*The above information constitutes basic guidelines for the application of the product and does not release the user from the obligation of carrying out works according to engineering principles and OHS regulations.*

*At the time of publication of this product data sheet all previous ones become void.  
 Date of update: 2018-04-16*