



ATLAS WODER SX

sealing mortar

- crystallisation technology
- for insulating foundations, basements and plinths
- self-healing effect of the coating and structural sealing of the substrate
- resistant to positive and negative water vapour pressure
- for the renovation of buildings with high moisture content



FOR WALLS
AND FLOORS



INDOORS
AND OUTDOORS



LAYER THICKNESS



MANUAL AND MACHINE
APPLICATION

CRYSTALLISATION TECHNOLOGY

ATLAS WODER SX is a technologically innovative product - not only does it effectively seal the concrete structure, but also, thanks to the crystallisation effect, it closes cracks of up to 0.4 mm in width that may occur in the substrate already during operation. The cracks are built up by water-insoluble salts which crystallise and gradually stop the leakage. The salt crystals build up in the cracks until the cracks are completely filled, leading to sealing and the disappearance of seepage water. The crystallisation isolates the surface and provides additional protection for the substrate also in the event of local damage to the coating or substrate. This provides permanent and continuous protection against moisture and water.

See next page for details.

Properties

ATLAS WODER SX is produced as a dry blend of high quality cements, latest generation powder resins, mineral fillers and modifying agents and sealing additives.

It can be used as a final layer without the need for finishing or protective layers - it is resistant to UV, frost and ageing. If the insulation made with ATLAS WODER SX will be exposed to mechanical influences, e.g. pedestrian traffic, it should be shielded, e.g. by making a floor, gypsum-free plaster or tile facing fixed with mortars of C2 class, e.g.: ATLAS GEOFLEX or ATLAS PLUS.

It can be used directly under tiles - as a composite waterproofing.

Effectively protects full bond brick and stone masonry walls.

Resistant to positive and negative water pressure:

- 7 bar (70 m water column) in the case of positive pressure, i.e. acting on the application side of the coating,
- 5 bar (50 m water column) in the case of negative pressure, i.e. the pressure acting from the side opposite the applied coating.

It has high adhesion:

- minimum 1.5 MPa for typical concrete substrates,
- minimum 1.45 MPa to brick.

Chemical resistance - the bonded mortar is resistant to municipal sewage, slurry as well as aggressive groundwater - environment class XA1, XA2, XA3.

Sulphate-resistant - allows application also on extremely saline surfaces (SO_4 ion concentration $<5\%$), e.g. when carrying out waterproofing in historic buildings, including bath-type insulation applied internally on stone, brick and mixed masonry. ATLAS system renovation plasters (products: ATLAS TRO, TRP, TR, TS, etc.) can be laid directly on top of insulation coatings.

Adheres to the substrate without priming.

It sets without shrinkage - the shrinkage cracks and cracks typical of cement mortars do not appear during setting.

Mechanical application possible.

Self-sealing effect of insulation coating with ATLAS WODER SX

The images presented below are taken under real conditions. using a time-lapse technique.



Photo 1. Waterproofing coating with ATLAS WODER SX on the concrete surface - water pressure from the inside. Active leakage at the location of the crack in the substrate.

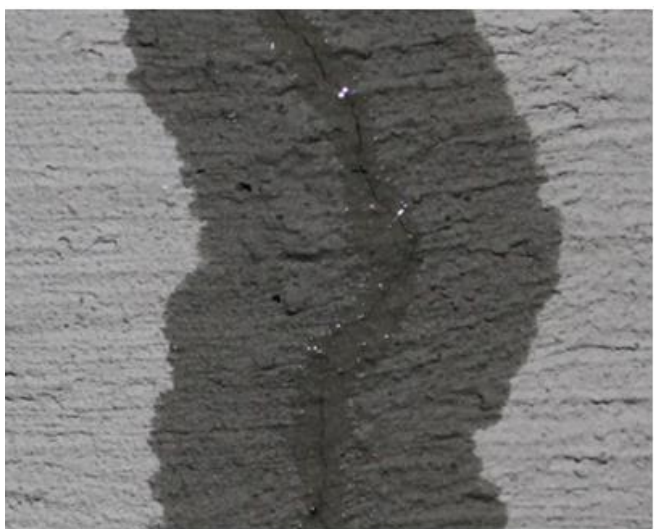


Photo 2. Gradual dampening of the insulation coating where the crack appeared.



Fig. 3. Gradual closing of the crack by crystallising salts, minor water seepage still present. Effect after 7 days.



Photo 4. Closure of the crack by salt crystals, no oozing. Effect after 21 days.



Photo 5. Slow build-up of salt crystals on the crack surface, sealing. Effect after 35 days.

Purpose

ATLAS WODER SX protects against negative and positive effects of water. It has a very wide range of applications. It is recommended for insulating underground parts of buildings, foundations, basements, plinths, external stairs, balconies and engineering structures, e.g.: tanks for municipal sewage, slurry, etc.

It is particularly recommended for insulating reinforced concrete tanks, weirs, culverts, manholes, etc., due to its ability to self-seal micro cracks. - thanks to its ability to self-seal micro cracks.

It can be used to insulate the building envelope in historic buildings, also on surfaces with a high degree of building salt contamination.

It is used for bath-type insulation of damp objects.

Can be used as composite insulation under ceramic tiles - indoors and outdoors on mineral substrates e.g. cement bases, concrete surfaces etc.

Enables effective protection of corners and expansion joints with the ATLAS HYDROBAND 3G tape embedded in it - the use of the tape (re-coating) is required in areas of stress concentration - it protects the edges of wall and floor subfloor joints and expansion joints.

It can be used as a first insulation coating on heavily damp masonry, allowing the application of external bituminous coating insulation: e.g. KMB-type compound, e.g. IZOHAN WM-2K.

TYPES OF WATERPROOFING	
external lightweight insulation (flowing water)	+
medium-type external insulation (stagnant water)	+
heavy-duty type external insulation (pressurised water)	+
internal lightweight insulation (flowing water)	+
internal insulation of medium type (stagnant water)	+
heavy-duty type internal insulation (pressurised water)	+

TYPES OF FACILITIES	
housing construction	+
public, educational, office and healthcare buildings	+
commercial and service construction	+
religious buildings	+
industrial buildings and garages multi-storey	+
industrial warehouses	+
traffic construction	+
engineering structures (culverts, weirs)	+

substrate type - standard	
cement floors and screeds	+
anhydrite primers	use ATLAS WODER E or ATLAS WODER W
cement and cement-lime plasters	+
gypsum plastering in damp and wet areas of rooms	use ATLAS WODER E or ATLAS WODER W
cellular concrete masonry*	+
brick, silicate block or stone masonry*.	+
brick or hollow brick masonry*	+
gypsum block masonry*	use ATLAS WODER E or ATLAS WODER W

* plastering is not necessary if the masonry is well jointed

PLACE OF INSTALLATION	
low-traffic areas*	+
medium traffic areas*	+
high traffic areas*	+
kitchen, bathroom, laundry room, garage (in individual housing)*	+
balconies, loggias*	+
underground parts of the building - foundations, basements including bathtub-type internal insulation	+
external staircase*	+
traffic routes*	+
cladding of building plinths	+
process vessels, fire protection	+
swimming pools, fountains, jacuzzi, balneotechnology (without aggressive chemicals)	use ATLAS WODER DUO
drinking water tanks	use ATLAS WODER DUO
slurry tanks	+
diesel fuel tanks	use ATLAS WODER DUO
tanks in waste water treatment plants (containing waste water of aggressiveness classes xa1, xa2 and xa3 according to en 206+a2:2021).	+
saunas*	+
showers, washing facilities, rooms washed with large quantities of water*	+

*insulation coating is an intermediate layer and requires final protection with screed, ceramic cladding, etc."

substrate type - difficult	
concrete	+
terrazzo	+
dry gypsum board screeds	use ATLAS WODER E or ATLAS WODER W
subfloors (cement) with embedded heating, water or electric	use ATLAS WODER E or ATLAS WODER W
cement and cement-lime plastering with concealed heating	use ATLAS WODER E or ATLAS WODER W
gypsum boards	use ATLAS WODER E or ATLAS WODER W
gypsum fibre boards	use ATLAS WODER E or ATLAS WODER W
cement fibre boards	use ATLAS WODER E or ATLAS WODER W
existing ceramic or stone cladding (tile on tile)**.	recommended ATLAS WODER DUO
resin varnishes for concrete bound to the substrate	recommended ATLAS WODER DUO
epoxy resin coatings	recommended ATLAS WODER DUO
plank flooring (thickness >25 mm)	recommended ATLAS WODER DUO
OSB/3, OSB/4 and particle board on the floor (thickness > 22 mm)	recommended ATLAS WODER DUO
OSB/3, OSB/4 and particle board on the wall (thickness > 18 mm)	recommended ATLAS WODER DUO
metal and steel surfaces	recommended ATLAS WODER E or ATLAS WODER W
plastic surfaces	recommended ATLAS WODER E or ATLAS WODER W

** subject to confirmation of load-bearing capacity and full grouting

Technical data

Bulk density (dry mix)	approx. 0.92 g/cm ³
Proportions for trowel application water / dry mix	0.28-0.30 l / 1 kg 7.0-7.5 l / 25 kg
Application proportions when applied by brush or sprayer water / dry mix	0.38-0.40 l / 1 kg 9.5-10.0 l / 25 kg
Minimum thickness of the sealant coating	1.5 mm
Maximum thickness of one layer	3 mm
Maximum thickness of coating applied at one time (filling of bumps)	5 mm
Temperature of mortar preparation and substrate and ambient temperature during the work	from +5 °C to +30 °C
Resistance to water pressure (positive water vapour pressure)	7 bar (70 metres water column)
Mortar readiness time	approx. 2 hours
Open time (drying time)	min. 30 minutes
Stepping in and applying the next layer	after 3 hours*
Sticking the cladding	after a minimum of 40 hours*
Resistance to pressurised water	after 7 days*

* Times recommended for application conditions of approx. 20 °C and 55-60% humidity.

Technical requirements

The product has the National Technical Assessment ITB-KOT-2022/2135 edition 1. National Declaration of Use No. K227.

Adhesion, MPa: – for concrete – for ceramic bricks	≥ 1,5 ≥ 1,45
Interlayer adhesion of the system: substrate + coating + tile adhesive ATLAS ULTRA GEOFLEX, MPa	≥ 0,95
Watertight, no leakage when pressure is applied from the side, MPa: – coating application, after 14 days, film thickness approx. 3 mm – coating application, after 28 days, film thickness approx. 3 mm – coating application, after 28 days, film thickness approx. 5 mm – opposite to the application of the render, after 28 days, film thickness approx. 3 mm	0,5 0,5 0,7 0,5
Water vapour permeability, defined by the thickness of the air layer whose diffusion resistance is equivalent to the average diffusion resistance of the coating to water vapour - S_d , m	≤ 0,2
Carbon dioxide permeability, defined by the thickness of the air layer whose diffusion resistance is equivalent to the average diffusion resistance of the coating to carbon dioxide - S_d , m	≤ 3,5
Static breakthrough resistance, as determined by the water resistance of the coating, in MPa, after load application: 5 kg, 10 kg, 15 kg, 20 kg	0,5
Resistance to elevated temperature water (+60°C), determined by adhesion to concrete substrate, MPa	≥ 2,9
Frost resistance after 50 freeze-thaw cycles, specified: - water tightness, no leakage under pressure, MPa - adhesion to concrete substrate, MPa	0,5 ≥ 1,5
Chemical resistance to: – acidified water with a pH of 4 – aqueous solution containing 100 mg/l of NH_4^+ – aqueous solution with 6000 mg/l of SO_4^{2-} – saturated solution of Mg ions ²⁺ – pool water – 3% detergent solution – 1% phenol solution assessed by a reduction in adhesion to the ground	≤ 5%
Emissions of volatile organic compounds (VOCs) - time required to reach acceptable concentrations of substances harmful to health, days	≤ 28

Implementation of waterproofing

Substrate preparation

The substrates must be even, absorbent and porous. Existing dirt, low-strength layers and any paint coatings or release agents (bitumen coatings) must be removed. Lime plaster and rotten masonry surfaces also need to be stripped. Corroded joints must be removed to a depth of 2 cm and fill with cement mortar. Corroded joints should be removed to a depth of approx. 2 cm and filled with cement mortar, e.g. ATLAS TRP. Deep cavities and cavities need to be re-bricked, filled with cement mortar or concrete. Any faults should be levelled. Substrates with irregular surface and heterogeneous structure (e.g. brick or stone walls) should be levelled locally or completely covered with ATLAS TRP renovation plaster. Before application, the substrate should be saturated with water without forming puddles (matt-wet substrate).

Detailed indications of substrate preparation, depending on the type of substrate, are shown in the table at the end of the Technical Sheet.

Preparation of the mass

The material from the bag should be poured into a vessel with a measured amount of water (the proportions are given in the Technical Data) and mixed with a slow speed mixer until a homogeneous consistency is obtained. The mass thus prepared should be used within approx. 2 hours.

Sealing - manual application

The waterproofing coat should be at least two layers. The first layer is applied with a brush, starting from the places where ATLAS HYDROBAND 3G. These accessories should be sunk into the freshly applied ATLAS WODER SX compound. The overlap of the tapes should be greater than 5 cm. It is recommended to apply insulation to both the substrate and the underside of the tape. The tapes should not be corrugated after laying. Excess material should be squeezed out from under the tape using a spatula. The second layer of waterproofing can be applied once the first layer has set. The second layer is applied using a brush or a steel trowel with tooth size:

- 6 mm for medium type insulation,
- min 8 mm for heavy type insulation.

When carrying out heavy type insulation, a 3-fold application of ATLAS WODER SX should be assumed.

Sealing - aggregate application

Mechanical waterproofing can be carried out in two or three stages, depending on the intended waterproofing type, i.e. light, medium or heavy. Waterproofing of the heavy type is achieved by a three-stage application.

The application of the first layer is carried out by spreading the compound on the substrate in such a way that the compound covers the surface evenly and 100%, forming a layer with a maximum thickness of 2.0 mm. Immediately after application, the still unbound mass should be smoothed with a smoothing trowel or trowel-type float until a homogeneous smooth coating is obtained.

The application of the second and third layers can take place after the previous layer has set. The final total thickness of the waterproofing should be no less than 2.5 mm (medium type insulation) and 3.0 mm (heavy type insulation). Allow the entire system to dry. In case of strong water pressure (positive pressure up to 0.7 MPa, negative pressure up to 0.5 MPa), the total thickness of the waterproofing should be 5.0 mm.

Recommended unit: WAGNER PC 1030 plastering unit Nozzle: 6 mm.
Speed: 3 on a scale of 10. Operating pressure: 8 bar.

Finishing work

If it is necessary to protect the coating from mechanical damage by applying plaster, flooring or cladding to it, this can be done approximately 40 hours after the sealing coat has been applied. **See the table at the end of the technical data sheet for details of the seasoning times.**

Consumption

The total thickness of the coating should be selected according to the water exposure conditions of the surface to be sealed.

Type of waterproofing	Total thickness of waterproofing mm	Consumption kg/m ²
light type insulation (water not settling on the surface of the coating)	1,5	approx. 2,25
medium type insulation (water ponding on the surface of the coating)	2,0	approx. 3,0
heavy type insulation (water under pressure)	3,0	≥ 4,0

Packaging

Paper bags: 25 kg.

Safety information

Safety information is given on the product packaging and in the Safety Data Sheet, available at www.atlas.com.pl.

Storage and transport

Information on storage and transport is given on the product packaging and in the Safety Data Sheet, available at www.atlas.com.pl.

The shelf life of the product (best before use) is 12 months from the production date on the packaging.

Important additional information

In the case of insulating water reservoirs, it is permissible to make the corners of the walls with ATLAS ZW 330 or ATLAS FILER S.

Low temperatures and increased humidity prolong the setting time of the mortar. Avoid working in strong sunlight.

Any culverts subjected to pressure should be secured with bolted ring seals.

Protect untreated surfaces from contamination.

The room needs to be ventilated for about 24 hours after the waterproofing has been applied.

Tools should be cleaned with clean water, immediately after use. Hard-to-remove residues of set mortar are washed off with ATLAS SZOP cement residue remover.

The information contained in this Technical Information Sheet is a basic guideline for the use of the product and does not relieve the user of the obligation to carry out the work in accordance with the rules of the art of construction and safety regulations. With the issue of this Technical Data Sheet, all previous ones are no longer valid. Documents accompanying the product are available at www.atlas.com.pl.

The contents of the Technical Information Sheet and the designations and trade names used therein are the property of Atlas Ltd. Their unauthorised use will be sanctioned.

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Specific indications for the preparation of the substrate, depending on its type.

Substrate type	Information on substrate preparation
Newly manufactured screed ATLAS SMS 15	required moisture content of the substrate 4.0 % CM - after approx. 8 hours
Newly manufactured screed ATLAS SMS 30	required moisture content of the substrate 4.0 % CM - after approx. 18 hours - for a thickness of 3-5 mm - after approx. 48 hours - for thicknesses of 6-10 mm - after approx. 72 hours - for a thickness of 11-20 mm - after approx. 96 hours - for a thickness of 21-30 mm
Newly manufactured cementitious screed ATLAS SMS 60 ULTRA	Moisture content of the substrate 4.0 % CM - after approx. 16 hours - for a thickness of 3-5 mm - after approx. 20 hours - for thicknesses of 5-10 mm - after approx. 36 hours - for a thickness of 10-15 mm - after approx. 2-3 days - for a thickness of 15-30 mm - after approx. 5 days - for a thickness of 30-60 mm
Newly manufactured floor screed ATLAS POSTAR 10	required moisture content of the substrate 4.0 % CM - after approx. 1.5 days for a thickness of 1-3 cm - after approx. 3 days for a thickness of 3-5 cm - after approx. 9 days for a thickness of 5-10 cm
Newly manufactured screed ATLAS POSTAR 20	required moisture content of the substrate 4.0 % CM - after approx. 1 day for a thickness of 1-3 cm - after approx. 2 days for a thickness of 3-5 cm - after approx. 5 days for a thickness of 5-8 cm
Newly manufactured screed ATLAS POSTAR 60	required moisture content of the substrate 4.0 % CM - after approx. 6 hours for 1-3 cm thickness - after approx. 12 hours for a thickness of 3-5 cm - after approx. 40 hours for a thickness of 5-8 cm
Newly manufactured screed ATLAS POSTAR 80	required moisture content of the substrate 4.0 % CM - after approx. 3 hours for 1-3 cm thickness - after approx. 6 hours for a thickness of 3-5 cm - after approx. 18 hours for a thickness of 5-8 cm
Other cementitious screeds	required moisture content of the substrate 4% CM - seasoning minimum 28 days
Terrazzo	Degrease the surface thoroughly and, in the case of pasted terrazzo, remove the top part or all of it and make a new primer.
Bricks or hollow bricks of calcium-silicate, ceramic or cellular concrete	A levelling layer (plaster) is required. The execution of waterproofing directly on unplastered masonry is only possible if the dimensional tolerance of the substrate is adequate. In this case, it is necessary to complete the wall with a full joint (or to complete the jointing) and to repair any cavities and irregularities using ready-made mortars.
Cement and cement-lime plasters from ATLAS ready- mixed mortars	- minimum curing time of 3 days* per cm of thickness - optimum humidity < 4% by weight.
Other cementitious plasters and cement-lime plasters	- minimum curing time of 7 days*.
Substrates to be levelled with ATLAS ZW 330 mortar	Seasoning min. 5 h for each 5 mm of levelling layer thickness
Concrete floors	- a minimum of 21 days seasoning time; - optimum humidity < 4% by weight. - absolutely clean from any shuttering oil residues and other substances that may impair adhesion. - Missing, chipped and other defects should be filled with ATLAS TEN-10 or ATLAS ZW 330 mortars.
Metal and steel surfaces	Required to be derusted, matted, cleaned and primed with a dedicated primer, e.g. ATLAS EPO-S universal epoxy binder with quartz sprinkling.

*) The times shown in the table are recommended for application conditions of approx. 20 °C and 50 % humidity.