REPAIR MORTARS

REPAIR MORTARS

Damages to mineral surfaces

Concrete, cement plasters and cement screeds and floors deteriorate, particularly when they are not installed correctly. Lack of attention to maximum cohesion and appropriate content of cement, failing to observe correct water to cement ratio and lack of proper maintenance lead to degradation relatively fast. In order to prevent further deterioration and select successful technology of repairs, one should find reason of damage first.
Factors causing defects to mineral substrates, i.e. occurrence of cracks, gaps and bends, loss of tightness, biological contamination, reinforcement steel corrosion or reduction of pH value, can be divided into several groups:

- mechanical – resulting from vibration and impact
- chemical – acid rains, ground water, polluted air
- physical – water freezing and thawing
- biological – development of fungi or algae
- performance – poor jacket, lack of maintenance, too high water/cement ratio
- operational - overloading, change of purpose etc.

Repairs of plasters and floors

Filling minor gaps in posts, stairs, balcony edges is a task, which can be successfully executed on one's own with the following mortars: ATLAS TEN-10, ATLAS ZW 50, ATLAS ZW 300, ATLAS MONTER T-5.

Repairs of ferroconcrete elements – ATLAS BETONER system

System technological solution – for comprehensive repairs of damaged concrete and ferroconcrete elements.
Full set of materials for repair works – system enables selection of mortars depending on surface size and depth of gaps.
Wide range of application - for repairs of both structural and finishing elements: ceilings, terraces, balconies, binding joists, posts, walls, stairs, floors.
Enables forming and exact reconstruction of the original shape and form of the repaired element - system comprises cement mortars for application with various coat thicknesses.
Gives the repaired elements appropriate soundness, resistance and improves their appearance.

TABLE 6.1

PRODUCT			
	ATLAS ADHER	ATLAS FILER	ATLAS ENDER
Reference document	PN-EN 1504-3:2006		
Function of system element	Contact coat	Repair layer	Finish coat
TECHNICAL DATA			
Mixing ratio water/dry mix [l/ 25 kg]	8.0-8.75	2.5-3.25	4.0-4.5
Layer thickness [mm]	1,0	10-50	3-10
Pot life [min]	120	60	60
Open time [min]	15	10	15
Temperature of mortar preparation and application [°C]	5-25	5-25	5-25
Time period after execution of the previous stage of work		Immediately after application of ATLAS ADHER contact coat	After 24 hours since application of ATLAS FILER leveling layer
Bonding to concrete [MPa]	≥ 0,8	≥ 0,8	≥ 0,8
Compressive strength	R1 class	R2 class	R2 class
Floor access/use [h]		24	24
Load [days]		14	14
Examples of use	Ceilings, ferroconcrete posts, construction slabs of terraces and balconies, retaining walls, ferroconcrete beams, ferroconcrete slabs and platforms of flight of stairs		

TABLE 6.2

PRODUCT					
	ATLAS ZW 50	ATLAS ZW 330 *	ATLAS MONTER T-5	ATLAS MONTER T -15	ATLAS TEN -10
	General-use leveling mortar	Fast-setting leveling mortar	Fast-setting assembly mortar	Fast-setting assembly mortar	Fast-setting cement mortar
	PN-EN 998-1:2012 PN-EN 13813:2003	PN-EN 998-1:2012 PN-EN 13813:2003			PN-EN-13813:2003
Reference document		AT-15-9437/2015	AT-15-8722/2011	AT-15-4332/2011 +Annex 1	AT-15-4411/2011 + Annex 1
TECHNICAL DATA					
Mixing ratio water/dry mix [l/kg]	0.14-0.17	0.17-0.22	ca. 0.25	0.12-0.13	0.12-0.15
Pot life [min]	120	120	5	15	40
Open time [min]	20	20	5	15	40
Min/max. thickness [mm]	3/50	3/30**	1/25***	20/50	5/30
Bonding [N/mm^2]	≥ 0.3	≥ 0.6	≥ 2.0	≥ 1.2	≥ 0.5
Compressive strength [N/mm^2]	25.0	≥ 20.0	after 6h > 10.0 after 24h > 25.0 after 28 days - 60	after 24h > 25.0 after 28 days > 60	40.0
Flexural strength [N/mm^2]	5.0	≥ 4.0	after 6h > 2.0 after 24h > 4.0 after 28 days – 9.0	after 24h > 3.5 after 28 days > 9.0	7.0
Tile fixing/further works [h]	12 (thick. 5 mm)	5 (thick. 5 mm)	6	6	24
Floor access/use [h]	12	8	0.5	0.5	3
PLACE OF APPLICATION					
Walls outdoors and indoors	✓	✓	✓		✓
Floors outdoors and indoors	✓	✓	✓	✓	✓
TYPE OF APPLICATION					
Repairs of small local surfaces	✓	✓	✓	✓	✓
Repairs of large floor surfaces	✓	✓			✓
Elements assembling			✓	✓	
TYPE OF SURFACE DAMAGE TO BE REPAIRED					
Cracking	✓	✓	✓	✓	✓
Deeper cavities		✓	✓	✓	✓

* Product can be used to execute screeds
** In order to obtain thicker layer from 31 to 60 mm, add quartz sand (grain size up to 2 mm) in weight ratio 1:4 (sand : dry mix)
*** In case of thickness above 25 mm, mix MONTER T-5 with quartz sand in 1:1 ratio

ATLAS ADHER

contact coat of ATLAS BETONER system

- repairs of concrete or ferroconcrete substrates
- forms contact coat of the system
- high bonding to concrete and steel
- does not cause corrosion of steel
- very low linear contraction

Use

Element of concrete and ferroconcrete repair system ATLAS BETONER.
Contact coat – improves bonding to substrate of the subsequent system layer.

Types of repaired surfaces – concrete and ferroconcrete elements.
Types of top finishes – leveling layer made of ATLAS FILER or finish coat made of ATLAS ENDER mortars.

Properties

High bonding to concrete and reinforcing steel – owing to special composition based on high quality cements and powder resins of new generation.
Precisely coats surface irregularities – liquid consistency allows for effective, easy and fast application of the mortar.
Very low linear contraction.
Does not cause corrosion of reinforcement.

Technical data

ATLAS ADHER is manufactured as a dry mix of high quality cement binder, quartz fillers and improvers.

Bulk density (of dry mix)	approx. 1.1 kg/dm^3
Mass bulk density (after mixing)	approx. 1.4 kg/dm^3
Mixing ratio (water/dry mix)	0.32 ÷ 0.35 l/1 kg 8.00 ÷ 8.75 l/25 kg
Mortar thickness	1 mm
Bonding to concrete	min. 1.0 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	approx. 5 minutes
Pot life	approx. 2 hours
Open time	min. 15 minutes

Technical requirements

The product conforms to PN-EN 1504-3:2006 standard. EC Declaration of Performance No. 085-1/CPR.

CE 11	PN-EN 1504-3:2006 (EN-1504-3:2005)
Repair mortar R1 class	designed for reconstruction and repairs of nonstructural damaged and uneven surfaces and concrete floors, indoors and outdoors
Compressive strength	≥ 10.0 MPa
Chloride ions content	≤ 0.05 %
Bonding to concrete substrate	≥ 0.8 MPa
Limited shrinkage, bonding after testing	NPD
Thermal compatibility, Part 1. Freeze-thaw cycles (50 cycles)	No cracks and scratches
Resistance to slip	Class II
Capillary absorption	NPD
Reaction to fire - class	F
Release/content of hazardous substances	See: Safety Data Sheet

The product has been given the Radiation Hygiene Certificate.

Substrate repairs

Substrate preparation

Concrete substrate should be stable, even and structurally sound, i.e. strong enough (stripping strength min. 1.5 MPa) and free from layers which would impair mortar adhesion. Clean the repaired surface of any loose or poorly bonded concrete layers and clean it from dust, dirt, lime, oil, grease, wax, remains of emulsion and oil paint. Concrete substrates which are significantly damaged, dirty, chemically or biologically corroded, must undergo special treatment, such as: shot blasting, milling, fumigation, etc.

Clean any exposed reinforcement elements from rust and any other pollution up to SA 2 degree of purity, e.g. by sand-blasting. Additionally, hack off concrete around bars which surface is fully or in significant part exposed, so the new coating made of ATLAS FILER mortar can be min. 1.5 cm thick. Then, the reinforcement can be coated with special paints with corrosion inhibitors, which additionally protect against corrosion.

Wet the substrate slightly (do not leave puddles) prior to the application of ATLAS ADHER mortar.

Mortar preparation

Pour the mortar from the bag into a clean container with the suitable amount of water (see Technical Data for ratio) and mix using a mixer with a drill until homogenous. The mass can be used after approx. 5 minutes and remixing, and should be used up within approx. 2 hours.

Contact coat application

Distribute ATLAS ADHER mortar evenly onto the substrate, rub it well with a brush or a paintbrush, going slightly beyond the area of the repaired surface. Keep the size of surface to be coated so the next layer made of ATLAS FILER or ATLAS ENDER mortars can be applied on the contact coat with "wet on wet" method. If the contact coat dries before application of the subsequent mortar, a new one should be applied.

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Consumption

The average consumption is 1.2 kg of dry mix for 1 m^2 for each 1 mm of layer thickness.

Important additional information

- During application and directly after, the repaired surface should be protected against precipitation and excessive drying. The drying time of the contact coat depends on the substrate absorbability as well as the ambient temperature and humidity.
- Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mortar can be removed with the ATLAS SZOP agent.
- 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.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%..

Packaging

Paper bags: 25 kg
Pallet: 1,050 kg in 25 kg bags

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: 2014-07-02

ATLAS FILER

repair layer of ATLAS BETONER system

- repairs of concrete or ferroconcrete substrates
- forms the main repair layer of the system
- high mechanical strength
- elasticity
- enables forming a slope

Use

Element of concrete and ferroconcrete repair system ATLAS BETONER – forms the main repair layer.
Enables correction of substrate irregularities – both in case of local filling as well as whole surface repairs.
Designed for repairs of ceilings, terraces, balconies, binding joists, poles, walls and stairs.
Enables forming and exact reconstruction of the original shape and form of the repaired element.

Types of repaired surfaces – concrete and ferroconcrete elements.
Types of top finishes – finish coat made of ATLAS ENDER mortar or ceramic cladding; can also form the top finish itself.

Properties

Enables forming a slope – which is an important factor, especially for outdoor surfaces, on terraces and balconies.
Elastic – enables repairing elements subject to deformation.
Very high mechanical strength:
• compressive – min. 43.0 MPa
• flexural – min. 9.0 MPa

Technical data

ATLAS FILER is manufactured as a dry mix of high quality cement binder, quartz fillers and improvers.

Bulk density (of dry mix)	approx. 1.5 kg/dm^3
Mass bulk density (after mixing)	approx. 2.2 kg/dm^3
Dry density (after setting)	approx. 2.0 kg/dm^3
Mixing ratio (water/dry mix)	0.10 ÷ 0.13 l/1 kg 2.5 ÷ 3.25 l/25 kg
Min./max. mortar thickness	10 mm/50 mm
Bonding to concrete coated with ATLAS ADHER after 28 days	min. 1.0 MPa
Compressive strength after 28 days	min. 43.0 MPa
Flexural strength after 28 days	min. 9 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	approx. 5 minutes
Pot life	approx. 1 hour
Open time	min. 10 minutes
Foot traffic	after approx. 24 hours
Application of finishing layer made of ATLAS ENDER mortar	approx. 24 hours
Fixing the tiles	after approx. 14 days
Full load	after approx. 14 days

Technical requirements

The product conforms to PN-EN 1504-3:2006 standard. EC Declaration of Performance No. 085-2/CPR.

CE	PN-EN 1504-3:2006 (EN-1504-3:2005)
Repair mortar R2 class	designed for reconstruction and repairs of nonstructural damaged and uneven surfaces and concrete floors, indoors and outdoors
Compressive strength	≥ 15.0 MPa
Chloride ions content	≤ 0.05 %
Bonding to concrete substrate	≥ 0.8 MPa
Limited shrinkage, bonding after testing	≥ 0.8 MPa
Thermal compatibility, Part 1. Freeze-thaw cycles (50 cycles)	No cracks and scratches
Resistance to slip	Class II
Capillary absorption	≤ 0.5 kg/(m^2 · h$^{0.5}$)
Reaction to fire - class	A1

The product has been given the Radiation Hygiene Certificate.

Substrate repairs

Substrate preparation
Concrete substrate should be stable, even and structurally sound, i.e. strong enough and free from layers which would impair mortar adhesion. Clean the repaired surface of any loose or poorly bonded concrete layers and clean it from dust, dirt, lime, oil, grease, wax, remains of emulsion and oil paint. Coat the substrate with contact coat made of ATLAS ADHER mortar according to its technology of use.

Mortar preparation
Pour the mortar from the bag into a clean container with the suitable amount of water (see Technical Data for ratio) and mix using a mixer with a drill (or in cement mixer) until homogenous. The mass can be used after approx. 5 minutes and remixing, and should be used up within approx. 1 hour.

Repair layer application
Distribute ATLAS FILER mortar evenly with a steel float or a guide all over the contact coat made of ATLAS ADHER with "wet on wet" method. Press the mortar firmly to the substrate when spreading, in particular when filling defects. Depending on the purpose of the leveling layer, smooth its surface with a steel float or give it a coarse texture, using a float with sponge.

Surface use
The surface can be used (walked upon) after approx. 24 hours and load can be applied after approx. 14 days. The execution of finish coat made of ATLAS ENDER mortar can commence after 24 hours. The time of commencement of finishing works depends on the type of the planned facing and should follow the requirements of its manufacturer. Fixing ceramic tiles should start not earlier than after stabilization of the repair layer parametres, i.e. after approx. 2-3 weeks and installation of PVC flooring or parquet – when the mortar dries completely.

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Consumption

The average consumption is 20 kg of dry mix for 1 m^2 for each 10 mm of layer thickness.

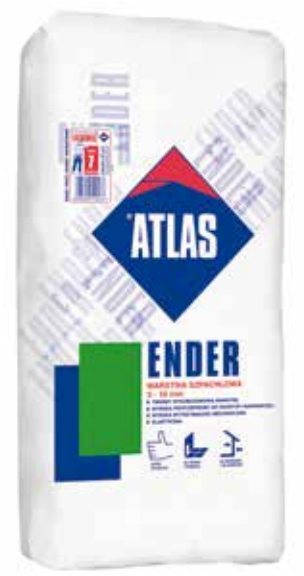
Important additional information

- During application and directly after (within approx. 3 days), the repaired surface should be protected against excessive drying, direct sunlight, low humidity and draughts. Within this time, in order to provide favourable conditions for mortar setting, its surface can be sprinkled with water or covered with foil, if required. Reduce the heating in room where works are carried out as well. The drying time of the layer depends on its thickness as well as the ambient temperature and humidity.
- Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mortar can be removed with the ATLAS SZOP agent.
- 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.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Paper bags: 25 kg
Pallet: 1,050 kg in 25 kg bags

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: 2014-07-02



ATLAS ENDER

finish coat of ATLAS BETONER system

- repairs of concrete or ferroconcrete substrates
- forms the finish coat of the system
- high mechanical strength
- elasticity
- forms smooth surface

Use

Element of concrete and ferroconcrete repair system ATLAS BETONER.
Outer, finish repair coat – for top finishing previously leveled and shaped surfaces.
Designed for repairs of ceilings, terraces, balconies, binding joists, poles, walls and stairs.

Types of repaired surfaces – concrete and ferroconcrete elements.
Types of top finishes – forms the finish coat; can be painted with paints for concrete.

Properties

With fine aggregate – forms smooth surface on the repaired elements.
Elastic – enables repairing elements subject to deformation.
Very high mechanical strength:
- compressive – min. 19.0 MPa
- flexural – min. 4.5 MPa

Technical data

ATLAS ENDER is manufactured as a dry mix of high quality cement binder, quartz fillers and improvers.

Bulk density (of dry mix)	approx. 1.4 kg/dm^3
Mass bulk density (after mixing)	approx. 1.4 kg/dm^3
Dry density (after setting)	approx. 1.5 kg/dm^3
Mixing ratio (water/dry mix)	0.16 ÷ 0.18 l/1 kg 4.0 ÷ 4.50 l/25 kg
Min./max. mortar thickness	3 mm / 10 mm
Bonding to ATLAS FILER layer	min. 1.0 MPa
Compressive strength after 28 days	min. 19.0 MPa
Flexural strength after 28 days	min. 4.5 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	approx. 5 minutes
Pot life	approx. 1 hour
Open time	min. 15 minutes
Foot traffic	after approx. 24 hours
Full load	after approx. 14 days

Technical requirements

The product conforms to PN-EN 1504-3:2006 standard. EC Declaration of Performance No. 085-3/CPR.

CE	PN-EN 1504-3:2006 (EN-1504-3:2005)
Repair mortar R2 Class	designed for reconstruction and repairs of nonstructural damaged and uneven surfaces and concrete floors, indoors and outdoors
Compressive strength	≥ 15.0 MPa
Chloride ions content	≤ 0.05 %
Bonding to concrete substrate	≥ 0.8 MPa
Limited shrinkage, bonding after testing	≥ 0.8 MPa
Thermal compatibility, Part 1. Freeze-thaw cycles (50 cycles)	No cracks and scratches
Resistance to slip	Class II
Capillary absorption	≤ 0.5 kg/(m^2 · h$^{0.5}$)
Reaction to fire - class	A1

The product has been given the Radiation Hygiene Certificate.

Substrate repairs

Substrate preparation
Concrete substrate should be stable, even and structurally sound, i.e. strong enough and free from layers which would impair mortar adhesion. Clean the repaired surface of any loose or poorly bonded concrete layers and clean it from dust, dirt, lime, oil, grease, wax, remains of emulsion and oil paint. Coat the substrate with contact layer made of ATLAS ADHER and next with leveling layer made of ATLAS FILER mortar according to their technology of use.

Mortar preparation
Pour the mortar from the bag into a clean container with the suitable amount of water (see Technical Data for ratio) and mix using a mixer with a drill until homogenous. The mass can be used after approx. 5 minutes and remixing, and should be used up within approx. 1 hour.

Surface finishing
Apply ATLAS ENDER on the leveling layer made of ATLAS FILER mortar (not earlier than 24 hours since its application) or on freshly applied coat of ATLAS ADHER mortar (with "wet on wet" method). The mortar requires even distribution over the surface (with concurrent strong pressing to the substrate) and smoothing with a steel float afterwards. It is recommended to float the surface with a damp float with sponge.

Surface use
The surface can be used (walked upon) after approx. 24 hours and load can be applied after approx. 14 days. Additional surface finishing with coating materials can commence after approx. 3-7 days, depending on the material type, manufacturer's guidelines as well as ambient temperature and humidity conditions.

Consumption

The average consumption is 20 kg of dry mix for 1 m^2 for each 10 mm of layer thickness.

Important additional information

- During application and directly after (within approx. 3 days), the repaired surface should be protected against excessive drying, direct sunlight, low humidity and draughts. Within this time, in order to provide favourable conditions for mortar setting, its surface can be sprinkled with water or covered with foil, if required. Reduce the heating in room where works are carried out as well. The drying time of the layer depends on its thickness as well as the ambient temperature and humidity.
- Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mortar can be removed with the ATLAS SZOP agent.
- 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.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Paper bags: 25 kg
Pallet: 1,050 kg in 25 kg bags

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: 2013-11-13

ATLAS ZW 50

general-use leveling mortar

- under tiles, finishing coats, plasters, screeds
- on walls and floors
- high bonding and compressive strength

Use

Substrate repairs prior to application of screeds.
Repairs of floors loaded with foot and vehicle traffic.
Repairs and reshaping of expansion joints in walls and floors (also industrial ones).
Filling joints between prefabricated elements and wide gaps in concrete and masonry substrates.
Filling wiring furrows.
Reconstruction of shapes of concrete elements (reshaping).
Substrates repairs – enables filing gaps and cavities as well as leveling other substrate irregularities.
Start of successive operations – in standard conditions tiling after approx. 12 hours (for layers 5 mm thick).
Reduces the consumption of adhesive mortars, plasters, screeds and floors.
Can be used for thin-coat bricklaying – for minor masonry works with non-structural building elements during finishing works.

Type of repaired substrates – cement and cement-lime plasters, concrete, aerated concrete, cement screeds, rough walls made of bricks and ceramic or silicate hollow blocks.
Type of finishing coats – ceramic cladding, finishing coats, thin-coat plasters/renders, protective, façade, interior paints, etc.

Properties

Enables quick progress of work and limits technological breaks.
Owing to wide range of thickness enables filling gaps of various depth with a single material in a single operation.
High bonding to substrate.
Can be painted with protective, façade and interior paints.
Easy in application – working parameters ensure easy application and filling gaps in the repaired surface.
High mechanical strength – compressive strength min. 25.0 MPa, flexural strength min. 5.0 MPa.
No shrinkage cracks.
Wide range of layer thickness – from 3 up to 50 mm.

Technical data

ATLAS ZW 50 is produced as a dry mix of high quality cement binder, quartz fillers and improvers.

Bulk density (of dry mix)	approx. 1.6 kg/dm^3
Mass bulk density (after mixing)	approx. 1.95 kg/dm^3
Dry density (after setting)	approx. 1.8 kg/dm^3
Mixing ratio (water/dry mix)	0.14 ÷ 0.17 l/1 kg 3.50 ÷ 4.25 l/25 kg
Contact coat	1 kg of dry mix + 0.12 l of water + 0.06 l of ATLAS ELASTIC EMULSION or ATLAS ADHER
Min./max. mortar thickness	3 mm/ 50 mm
Max. aggregate size	3.00 mm
Bonding	min. 0.3 MPa
Compressive strength	min. 25.0 MPa
Flexural strength	min. 5.0 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life	2 hours
Open time	min. 20 minutes
Fixing the tiles	after 12 hours /5 mm of layer thickness after 24 hours /10 mm of layer thickness after 72 hours /20 mm of layer thickness

The time shown in the table is recommended for the application in the temperature 23°C and humidity 50% (approx.).

Technical requirements

ATLAS ZW 50 conforms to PN-EN 998-1 and PN-EN 13813 standards. EC Declaration of Performance No. 178/CPR.

CE	PN-EN 998-1:2012 (EN 998-1:2010) PN-EN 13813:2003 (EN 13813:2002)
Factory made plastering mortar of specified properties, general-purpose (GP), for manual application	for indoor and outdoor use, on walls, ceilings, posts and partition walls
Cement-based screed CT-C25-F5	for indoor use
Water absorption	W1
Bonding	0.3 N/mm^2 - FP:B
Water vapour permeability coefficient (tabular value μ)	15/35 (EN 1748:2002, table A.12)
Thermal conductivity coefficient (average tabular value P=50%)	0.83 W/mK ($\lambda_{10, dry}$) (EN 1748:2002, table A.12)
Gross dry mortar density	≤ 1800 kg/m^3
Release of corrosive substances	CT
Compressive strength – class	C 25
Flexural strength - class	F 5
Reaction to fire - class	A1 $A1_{fl}$
Resistance to abrasion, water permeability, chemical resistance, water vapour permeability, acoustic insulation, thermal resistance, sound absorption	NPD
Release/content of hazardous substances	See: Safety Data Sheet

Substrate repairs and installation of screeds

Substrate preparation - for substrate repairs

The substrate should be dry and sound, i.e. it should be strong enough and free from layers, which would impair the mortar bonding, in particular dust, dirt, lime, oil, grease, wax, bituminous substances and paints residues. Remove loose pieces and weak substrate elements mechanically, e.g. hack them off. Just before the application of the main mortar layer, the substrate should be moistened with water up to the matt-wet state. If improvement of bonding to the substrate is required, one should apply the contact coat (description below).

Contact coat preparation

The contact coat can be prepared with one of the following methods:
- with ATLAS ZW 50 modified with ATLAS ELASTIC EMULSION in ratio: 1 kg of dry mix + 0.12 l of water + 0.06 l of ATLAS ELASTIC EMULSION,
- with ATLAS ADHER mortar.

The contact coat has liquid consistency and can be applied with a brush. Rub it well into previously moistened substrate, then apply the main mortar layer with "wet on wet" method. When the contact coat dries, apply another one before the application of the main mortar layer.

Mortar preparation

Pour the mortar from the bag into a clean container with the suitable amount of water (see Technical Data for ratio) and mix using a mixer with a drill until homogenous. The mortar is ready to use directly after mixing and should be used up within approx. 2 hours.

Mortar use - repair mass

Apply the mortar onto previously prepared and primed substrate with a trowel or a smooth steel float. The single mortar layer thickness used in a single operation should not exceed 30 mm. After initial setting, the applied mortar layer can be floated with a felt or a polystyrene float or smoothed with a steel float. When preparing the substrate for tiling, float the mortar rough.

Mortar use - screed

The screed should be separated from walls and other elements within the application area with ATLAS EXPANSION JOINT PROFILES. The size of application area should not exceed 36 m^2 with sides length up to 6 m.

The expansions joints should also be executed at room thresholds and around load-bearing posts. The existing structural expansion joints should be transferred onto the screed layer. The single mortar layer thickness used in a single operation should not exceed 30 mm. Layers up to 50 mm thick are acceptable for application areas up to 1 m^2 large. Spread the mortar with a steel float.

Screed drying and maintenance

In order to ensure favourable conditions for mortar setting, depending on needs, sprinkle the freshly applied surface with water or cover it with foil. Proper maintenance leads to increase of strength of product but also extends the time of drying. The time of drying of screed depends on the layer thickness and ambient thermal and humidity conditions. The use of screed (foot traffic) can start after approx. 10-12 hours and full load after approx. 3 days.

Finishing works

Follow the guidelines listed in the Technical Data section when fixing the tiles on the repair layer made of ATLAS ZW 50. Prime the surface with ATLAS UNIGRUNT before tiling.

Consumption

The average consumption is approx. 18 kg of dry mix/ 1 m^2 / 10 mm of layer thickness.

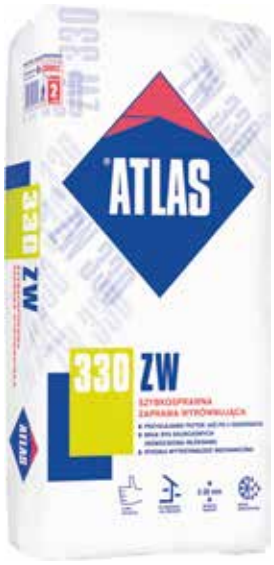
Important additional information

- During application and directly after, the surface should be protected against precipitation and excessive drying (moist with water or cover with foil, if required).
- Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mortar can be removed with the ATLAS SZOP agent.
- 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.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Paper bags: 25 kg
Pallet: 1,050 kg in 25 kg bags

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: 2016-06-20



ATLAS ZW 330
fast setting leveling mortar

- high bonding and compressive strength
- reinforced with polypropylene fibres
- plastic consistency
- under tiles, finishing coats, plasters, screeds
- tiling just after a few hours

Use

Substrates repairs indoors and outdoors – enables filing gaps and cavities as well as leveling other substrate irregularities.
Execution of bonded screeds.

Types of repaired surfaces – cement and cement-lime plasters, concrete, aerated concrete, cement jointless floors, rough walls made of bricks and ceramic or silicate hollow blocks.
Type of finishing coats – ceramic cladding, finishing coats, thin-coat plasters/ renders, floor panels, etc.

Properties

Enables quick start of successive operations – in standard conditions tiling just after approx. 5 hours (for layers 5 mm thick).
Reduces the consumption of adhesive mortars, plasters, screeds and floors.
Plastic consistency – working parameters ensure easy application and filling gaps in the repaired surface.
High mechanical strength – compressive strength min. 20.0 MPa, flexural strength min. 4.0 MPa.
Reinforced with polypropylene fibres which:
- reduce cracking resulting from shrinkage during the mortar setting,
- enable application of thicker mortar layers on vertical surfaces, with no slip effect,
- ensure uniform water distribution during drying.

No shrinkage cracks.
Wide range of layer thickness – from 3 up to 30 mm in a single operation – one may extend the layer thickness up to 60 mm after mixing the mortar with quartz sand (grain size up to 2 mm) in 1:4 weight ratio (quartz sand : dry mortar) - recommended when filling gaps and leveling horizontal surfaces.

Technical data

ATLAS ZW 330 is produced as a dry mix of high quality cement binder, quartz fillers and improvers.

Bulk density (of dry mix)	approx. 1.6 kg/dm^3
Mass bulk density (after mixing)	approx. 1.95 kg/dm^3
Dry density (after setting)	approx. 1.8 kg/dm^3
Mixing ratio (water/dry mix)	0.17 ÷ 0.22 l/1 kg 4.25 ÷ 5.5 l/25 kg
Contact coat	1 kg of dry mix + 0.12 l of water + 0.06 l of ATLAS ELASTIC EMULSION or ATLAS ADHER
Min./max. mortar thickness	3 mm/ 30 mm For wider gaps (from 31 mm up to 60 mm) quartz sand of grain size up to 2.0 mm can be added in 1:4 ratio (quartz sand : dry mortar)
Max. aggregate size	1.00 mm
Bonding	min. 0.6 MPa
Compressive strength	min. 20.0 MPa
Flexural strength	min. 4.0 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life	approx. 2 hours
Open time	min. 20 minutes
Fixing the tiles	after 5 hours /5 mm of layer thickness after 10 hours /10 mm of layer thickness after 20 hours /20 mm of layer thickness after 48 hours/layer thickness above 20 mm
Panels installation	after 48 hours

The time shown in the table is recommended for the application in the temperature 23°C and humidity 50% (approx.).

Technical requirements

ATLAS ZW 330 conforms to PN-EN 998-1 and PN-EN 13813 standards. EC Declaration of Performance No. 167/CPR.

CE	PN-EN 998-1:2012 (EN 998-1:2010) PN-EN 13813:2003 (EN 13813:2002)
Factory made plastering mortar of specified properties, general-purpose (GP), for manual application	for indoor and outdoor use, on walls, ceilings, posts and partition walls
Cement-based screed CT-C20-F4	for indoor use
Water absorption	W1
Bonding	0.6 N/mm^2 - FP:B
Water vapour permeability coefficient (tabular value μ)	15/35 (EN 1748:2002, table A.12)
Thermal conductivity coefficient (average tabular value P=50%)	0.83 W/mK ($\lambda_{10, dry}$) (EN 1748:2002, table A.12)
Durability. Compressive strength decrease after 25 freeze-thaw cycles	≤ 15 %
Durability. Mass decrement after 25 freeze-thaw cycles	≤ 3%
Gross dry mortar density	≤ 1800 kg/m^3
Release of corrosive substances	CT
Compressive strength – class	C 20
Flexural strength - class	F 4
Reaction to fire - class	A1 $A1_{fl}$
Resistance to abrasion, water permeability, chemical resistance, water vapour permeability, acoustic insulation, thermal resistance, sound absorption	NPD
Release/content of hazardous substances	See: Safety Data Sheet

The product has been given the ITB Technical Approval No. AT-15- 9437/2015. Domestic Declaration of Conformity No. 167 of 06.03.2015.

Substrate repairs and installation of screeds

Substrate preparation - for substrate repairs
The substrate should be dry and sound, i.e. it should be strong enough and free from layers, which would impair the mortar bonding, in particular dust, dirt, lime, oil, grease, wax, bituminous substances and paints residues. Remove loose pieces and weak substrate elements mechanically, e.g. hack them off. Just before the application of the main mortar layer, the substrate should be moistened with water up to the matt-wet state. If improvement of bonding to the substrate is required, one should apply the contact coat (description below).

Substrate preparation - for bonded screeds
The substrate should be free from layers, which would impair the mortar bonding, in particular dust, dirt, lime, oil, grease, wax, bituminous substances and paints residues, poor or loosening pieces of old screeds. Just before the application of the main mortar layer, the substrate should be moistened with water up to the matt-wet state and the contact coat applied (description below).

Contact coat preparation
The contact coat can be prepared with one of the following methods:
- with ATLAS ZW 330 modified with ATLAS ELASTIC EMULSION in ratio: 1 kg of dry mix + 0.12 l of water + 0.06 l of ATLAS ELASTIC EMULSION,
- with ATLAS ADHER mortar.

The contact coat has liquid consistency and can be applied with a brush. Rub it well into previously moistened substrate, then apply the main mortar layer with "wet on wet" method. When the contact coat dries, apply another one before the application of the main mortar layer.

Mortar preparation
Pour the mortar from the bag into a clean container with the suitable amount of water (see Technical Data for ratio) and mix using a mixer with a drill until homogenous. The mortar is ready to use directly after mixing and should be used up within approx. 2 hours.

Mortar use - repair mass
Apply the mortar onto previously prepared and primed substrate with a trowel or a smooth steel float. The single mortar layer thickness should not exceed 30 mm. The layer thickness can be increased up to 60 mm after mixing the mortar with quartz sand (grain size up to 2 mm) in 1:4 weight ratio (quartz sand : dry mortar). After initial setting, the applied mortar layer can be floated with a felt or a polystyrene float or smoothed with a steel float. When preparing the substrate for tiling, float the mortar rough.

Mortar use - screed
The screed should be separated from walls and other elements within the application area with ATLAS EXPANSION JOINT PROFILES. The size of application area should not exceed 36 m^2 with sides length up to 6 m.
The expansions joints should also be executed at room thresholds and around load-bearing posts. The existing structural expansion joints should be transferred onto the screed layer. Spread the mortar with a steel float.

Screed drying and maintenance
In order to ensure favourable conditions for mortar setting, depending on needs, sprinkle the freshly applied surface with water or cover it with foil. Proper maintenance leads to increase of strength of product but also extends the time of drying. The time of drying of screed depends on the layer thickness and ambient thermal and humidity conditions. The use of screed (foot traffic) can start after approx. 8-10 hours and full load after approx. 3 days.

Finishing works
Follow the guidelines listed in the Technical Data section when fixing the tiles on the repair layer made of ATLAS ZW 330. Prime the surface with ATLAS UNIGRUNT before tiling.

Consumption

The average consumption is approx. 15 kg of dry mix/ 1 m^2 / 10 mm of layer thickness.

Important additional information

- The mortar parametres listed in the Technical data and technical requirements sections refer to unmodified mortar. The addition of quartz sand (for use with layers from 31 up to 60 mm thick) reduces the mortar strength and extends the time of setting.
- During application and directly after, the surface should be protected against precipitation and excessive drying (moist with water or cover with foil, if required).
- Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mortar can be removed with the ATLAS SZOP agent.
- 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.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Paper bags: 25 kg
Pallet: 1,050 kg in 25 kg bags

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At the time of publication of this product data sheet all previous ones become void.
Date of update: 2015-04-24

ATLAS TEN-10

fast setting cement mortar

- for repairs of concrete and ferroconcrete substrates
- for execution of floors exposed to high loads
- rapid strength build-up, limited contraction
- foot traffic already after 3 hours
- strong bonding to ceilings

Use

For repairs of concrete and ferroconcrete elements – corrects local irregularities as well as whole surfaces of balconies, terraces, posts, binding joists, stairs, ramps, etc.
For filling cavities and cracks in mineral substrates – plasters, screeds, etc.
Forms floor characterized by high compressive strength and abrasion resistance – can be used on ramps and loading driveways, in storage and production halls.
Foot traffic already after 3 h – enables fast execution of work in passageways, corridors, on driveways, ramps, etc.
Enables forming and exact reconstruction of the original shape and form of the repaired element – e.g. edge of balcony or terrace slab, curbs, stairs and landings.

Types of repaired surfaces – concrete and ferroconcrete, cement-based plasters and screeds.
Types of top finishes – can work as substrate for tiles, parquet, floor panels; can also form the top finish itself.

Properties

Rapid initial strength build-up – already after 24 h, the mortar reaches compressive strength of at least 20 N/mm^2 and flexural strength of at least 3.5 N/mm^2.
Fixing tiles possible already after 24 hours.
During application, perfectly bonds to ceilings and bottom side of balcony slabs – owing to molecular cohesion strength active when the mortar is semi-liquid.
Enables forming a slope - owing to properly selected, dense working consistency, the mortar enables forming slopes on surfaces exposed to water load.

Technical data

ATLAS TEN-10 is manufactured as a dry mix of high quality cement binder, quartz fillers and improvers.

Bulk density (of dry mix)	approx. 1.50 kg/dm^3
Mass bulk density (after mixing)	approx. 2.05 kg/dm^3
Dry density (after setting)	approx. 2.00 kg/dm^3
Mixing ratio (water/dry mix)	0.12 ÷ 0.15 l/1 kg 3.0 ÷ 3.75 l/25 kg
Contact coat ratio	1 kg of dry mix + 0.18 l of water + 0.09 l of ATLAS ELASTIC EMULSION
Min./max. mortar thickness	5 mm / 30 mm
Maximum aggregate grain size	3.0 mm
Bonding to concrete	min. 0.5 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +30°C
Pot life	approx. 40 minutes
Foot traffic	after approx. 3 hours
Fixing the tiles	after approx. 24 hours

Technical requirements

The product has been given the ITB Technical Approval No. AT-15- 4411/2011. Domestic Declaration of Conformity No. 034 of 25.05.2011. Additionally the product conforms to PN-EN 13813 standard. EC Declaration of Performance 034/CPR.

CE 0767	PN-EN 13813:2003 (EN 13813:2002)
Cement based screed CT-C40-F7-AR6	for indoor use
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CT
Compressive strength – class	C40 (≥ 40 N/mm^2)
Flexural strength - class	F7 (≥ 7 N/mm^2)
BCA abrasion resistance - class	AR6
Water permeability, vapour permeability, acoustic insulation, noise damping, heat resistance, chemical resistance	NPD
Release/content of hazardous substances	See: Safety Data Sheet

The product has been given the Hygiene Certificate by the National Institute of Hygiene and the Radiation Hygiene Certificate.

Substrate repairs

Substrate preparation

The substrate should be dry and structurally sound, i.e. strong enough and free from layers which would impair mortar adhesion, in particular dust, dirt, lime, oil, grease, wax, bitumen substances and paint residues. Remove loose pieces and weak substrate elements mechanically, e.g. hack them off. The substrate should be rough and porous. Any substrate scratches and defects must be widened mechanically up to min. 5 mm of width. Smooth substrates should be hammered in order to form rough surface. Immediately before the application of the main mortar layer, the substrate should be moistened with water and contact coat made of 10 kg of ATLAS TEN-10, 1.8 l of water and 0.9 l of ATLAS ELASTIC EMULSION, applied. It is sufficient to coat approx. 10 m^2.

Expansion joints

When installing screeds or floors, walls and other elements within the range of application should be separated (with expansion joints) from the compound with, e.g. ATLAS EXPANSION JOINT PROFILES or thin polystyrene strips. Additionally, mark on walls the location of existing substrate expansion joints, in order to transfer them over the screed layer.

Mass preparation

Pour the mortar from the bag into a clean container the suitable amount of water (see Technical Data for ratio) and mix using a mixer with a drill until homogenous. The mortar is ready to use directly after mixing and should be used up within approx. 40 minutes.

Contact coat application

Apply the contact coat upon the prepared and moistened surface. The mix must be prepared according to ratio listed in the Technical Data section. It is liquid and can be applied with a brush. Rub it well into the substrate. When the contact coat dries, apply another one before the application of the main repair layer.

Mass application

While the contact coat is still wet, apply the main repair layer of ATLAS TEN-10 using a steel float and carefully fill (by pressing) the existing scores and cracks. Join successive mortar batches before the material starts to set. Depending on temperature and humidity conditions, the mortar starts setting already after approx. 1 hour. Within this time, the initially set surface can be smoothed or floated, if required. When applying ATLAS TEN-10 as screed or floor, carry out the installation according to flooring technology, keeping in mind the shorter setting time of the mortar and execution of appropriate expansion joints. Floor usage – foot traffic is possible already after approx. 3 hours since the application.

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Coverage

The average coverage is: 1 m^2/1 cm/20 kg of dry mix.

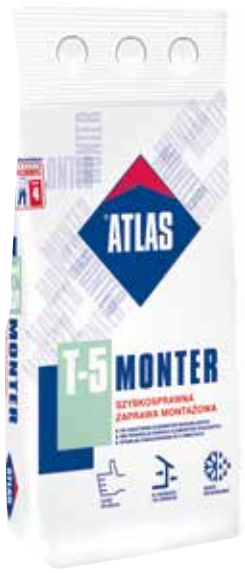
Important additional information

- Adjust the ratio of added water experimentally (keeping the ratio listed in the Technical Data section), following the desired consistency of the mortar, type of substrate and weather conditions. Inappropriate amount of mix water results in deterioration of strength parameters of the mortar.
- During application and directly after, the surface should be protected against precipitation and excessive drying (moist with water or cover with foil, if required).
- Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mortar can be removed with the ATLAS SZOP agent.
- 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.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Paper bags: 25 kg
Pallet: 1,050 kg in 25 kg bags

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: 2015-08-27



ATLAS MONTER T-5

fast setting assembly mortar

- for anchoring construction elements
- beginning of setting just after 5 minutes
- high strength
- does not cause corrosion of steel, chloride-free
- blocks local water leakages

Use

Anchoring elements on horizontal surfaces – foundation screws, fencing poles, stairs and balcony railings, etc.
Anchoring elements on vertical surfaces – anchors, hooks, pins, dowels, slings, window hinges, gates and doors; supports of plumbing, gas and central heating systems, wiring elements - electrical boxes, etc.; corner or guide profiles, bars, etc.
Embedding and joining concrete elements – wells, drains, etc.
Quick surface repairs – filling cracks and gaps in ceiling and wall slabs, floors and cement plasters, prefabricated elements.
Installation of building elements – window sills, lintels, beams and stair stringers.
Blocking local water leakages – effectively fills the point of leakage.
Re-profiling concrete elements – restoration of shape of concrete elements, e.g. edges.
Can be used in swimming pools, drinking water reservoirs, as well as facilities and constructions in contact with drinking water.

Type of anchored elements – steel, ferroconcrete and plastic.
Type of surface in which the element is to be anchored – structural masonry elements, concrete and ferroconcrete.

Properties

Fast-setting – characterized by very short setting time and rapid strength build-up.
Gives stable anchoring just after 5 minutes.
Adjustable consistency – from semi-liquid, allowing for accurate filling the space when anchoring elements on horizontal surfaces, to plastic one, preventing the mass outflow during anchorage of elements in walls, etc.
Wide range of use – when mixed with quartz sand (grain size up to 2 mm) in 1:1 ratio, the mortar can be used for filling gaps up to 40 mm wide.
Eliminates the possibility of occurrence of surface cracking of the set mortar.
Does not cause chloride corrosion of metal elements.

Technical data

ATLAS MONTER T-5 is manufactured as a dry mix of high quality cement binder, quartz fillers and modifiers.

Bulk density (of dry mix)	approx. 1.4 kg/dm^3
Mass bulk density (after mixing)	approx. 1.4 kg/dm^3
Dry density (after setting)	approx. 1.8 kg/dm^3
Mixing ratio (water/dry mix)	approx. 0.25 l/1 kg approx. 1.25 l/5 kg approx. 6.25 l/25 kg
Min./max. thickness	1 mm/ 25 mm For wider gaps (up to 40 mm) quartz sand of grain size up to 2.0 mm can be added in 1:1 ratio
Bonding	min. 2.0 MPa
Compressive strength	after 6 hours > 10.0 MPa after 24 hours> 25.0 MPa after 28 days > 60.0 MPa
Flexural strength	after 6 hours > 2.0 MPa after 24 hours > 4.0 MPa after 28 days > 9.0 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +30°C
Pot life	approx. 5 minutes
Open time	approx. 5 minutes

Technical requirements

The product has been given the ITB Technical Approval No. AT-15-8722/2011. Domestic Declaration of Conformity No. 105 of 21.09.2011, Factory Production Certificate No. ITB-0492/Z.
The product has been given the Radiation Hygiene Certificate and the Hygiene Certificate no. HK/W/0335/01/2013 issued by the National Institute of Hygiene.

Elements anchoring

Substrate preparation
The substrate should be strong enough and free from layers which would impair mortar bonding, in particular dust, dirt, lime, oil, grease, wax. Prepare the element to be anchored in a similar way, i.e. clean of rust and old paint coatings. In order to reduce the absorptivity, wet the substrate surface and the element surface (if made of concrete or ferroconcrete) before the application of the mortar.

Mass preparation
Pour the mortar from the bag into a clean container with the suitable amount of water (see Technical Data for ratio) and mix using a mixer with a drill until homogenous. The mortar should be used up within approx. 5-10 minutes. When anchoring or filling irregularities requiring mortar layer thickness exceeding 25 mm, quartz sand should be added in 1:1 ratio.

Anchoring the element
Size of clearance to be filled with mortar, between the sides of the opening and fixed element, should be 25 mm thick. In justified cases, e.g. grout installation, the area of the mortar application should be boarded. The anchored element should be placed in the prepared opening or groove and properly stabilized in order to prevent displacement during the mortar pouring. The free space around the element should be filled with ATLAS MONTER T-5 mortar.
Note: Do not change the position of the anchored element when the mortar is setting.

Consumption

The average consumption is 1.8 kg of dry mix for 1 dm^3 of filling mass.

Important additional information

- During application and directly after, the surface should be protected against precipitation and excessive drying (moist with water or cover with foil, if required).
- Water reservoirs designated for drinking water should be washed with water after the product ageing.
- Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mortar can be removed with the ATLAS SZOP agent.
- 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.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Foil bags: 5 kg (collective packaging: cardboard box 4 x 5 kg), paper bags: 25 kg
Pallet: 720 kg in 5 kg bags, 1,050 kg in 25 kg bags

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: 2015-03-27

ATLAS MONTER T-15

fast setting assembly mortar

- for anchoring construction elements
- does not cause corrosion of steel elements
- strong adhesion to substrate
- grout under machines and equipment
- rapid strength build-up

Use

Recommended for anchoring construction elements – in masonry, concrete and ferroconcrete substrates, on horizontal surfaces.
Provides permanent fixing already after 15 minutes – when assembling steel anchors, anchoring bolts, fencing poles, balcony and stairs railings, etc.
Enables execution of grouts – when efficient and precise positioning of machines, beams, guides or poles in concrete substrate is required.
Recommended for filling spaces between stone and concrete sidewalk tiles – wherever the sufficiently long technological breaks are not possible.

Types of repaired elements – concrete and ferroconcrete construction elements.

Properties

Liquid consistency – therefore fills the space between the anchored element and sides of the opening fully and precisely, ensuring permanent and reliable anchoring.
Eliminates the possibility of occurrence of surface cracking of the set mortar – has very low linear contraction.

Technical data

ATLAS MONTER T-15 is manufactured as a dry mix of the high quality cement binder, quartz fillers and improvers.

Bulk density (of dry mix)	approx. 1.4 kg/dm^3
Mass bulk density (after mixing)	approx. 2.1 kg/dm^3
Dry density (after setting)	approx. 2.2 kg/dm^3
Mixing ratio (water/dry mix)	0.12 ÷ 0.13 l/1 kg 3.00 ÷ 3.25 l/25 kg
Min./max. mortar thickness	20 mm / 50 mm
Bonding	min. 1.2 MPa
Compressive strength	after 24 hours > 25.0 MPa after 28 days > 60.0 MPa
Flexural strength	after 24 hours > 3.5 MPa after 28 days > 9.0 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +30°C
Pot life	approx. 15 minutes
Open time	approx. 15 minutes

Technical requirements

The product has been given the ITB Technical Approval No. AT-15- 4332/2011. Domestic Declaration of Conformity No. 033 of 01.06.2011. Factory Production Control Certificate No. ITB-0017/Z. The product has been given the Hygiene Certificate No. HK/W/0335/02/2013 by the National Institute of Hygiene and the Radiation Hygiene Certificate.

Elements anchoring

Substrate preparation

The substrate should be strong enough and free from layers which would impair mortar bonding, in particular dust, dirt, lime, oil, grease, wax. Prepare the element to be anchored in a similar way, i.e. clean of rust and old paint coatings. In order to reduce the absorptivity, wet the substrate surface and the element surface (if made of concrete or ferroconcrete) before the application of the mortar.

Mass preparation

Pour the mortar from the bag into a clean container with the suitable amount of water (see Technical Data for ratio) and mix using a mixer with a drill until homogenous. The mortar should be used up within approx. 15 minutes.

Anchoring the element

Size of clearance to be filled with mortar, between the sides of the opening and fixed element, as well as the grout should be 25-50 mm thick. In justified cases, e.g. grout installation, the area of the mortar application should be boarded. The anchored element should be placed in the prepared opening or groove and properly stabilized in order to prevent displacement during the mortar pouring. The free space around the element should be filled with ATLAS MONTER T-15 mortar.

Note: Do not change the position of the anchored element when the mortar is setting.

Consumption

The average consumption is 2 kg of dry mix for 1 dm^3 of filling mass.

Important additional information

- During application and directly after, the surface should be protected against precipitation and excessive drying (moist with water or cover with foil, if required).
- Water reservoirs designated for drinking water should be washed with water after the product ageing.
- Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mortar can be removed with the ATLAS SZOP agent.
- 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.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Paper bags: 25 kg
Pallet: 1,050 kg in 25 kg bags

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: 2014-04-04