FLOORS AND SCREEDS

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Floors

Floor is a system of layers consisting of substrate (usually ceiling or ground), damp proofing or vapour barrier, acoustic or thermal insulation, separating layer, screed and top floor. The choice of individual floor layers depends on actual type of load and function of a room. Floor is directly exposed to intensive functional load: static – resulting from weight of objects placed upon, and dynamic - caused by foot or vehicle traffic, etc.

Screed

Screed is a floor layer installed in order to form specific level or to build substrate appropriately sound for the top floor layer. It can be applied with a few arrangements:

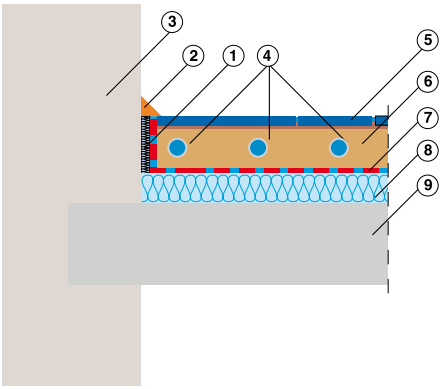
- **bonded – poured directly upon substrate, e.g. ceiling,**
- **on layer separating from substrate – e.g. foil damp proofing,**
- **floating – on layer of acoustic or thermal insulation,**
- **heating – with water or electric floor heating system embedded.**

Basing on the binder type used during production, ATLAS screeds are classified (in accordance to PN-EN 13813:2003 standard) as:

- anhydrite (CA)
- cement (CT)

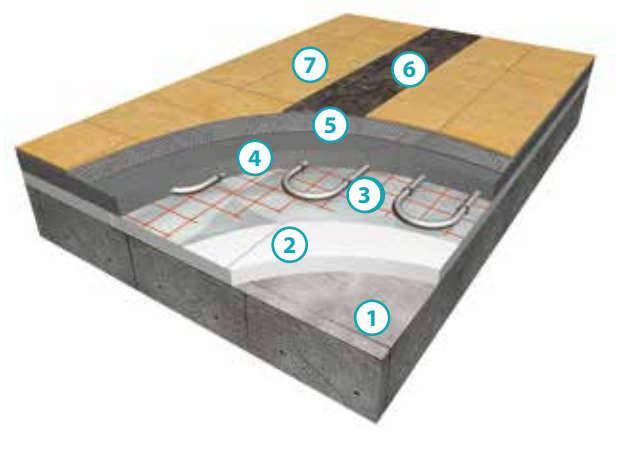
Top floor

Top floor is the surface, finishing floor layer.

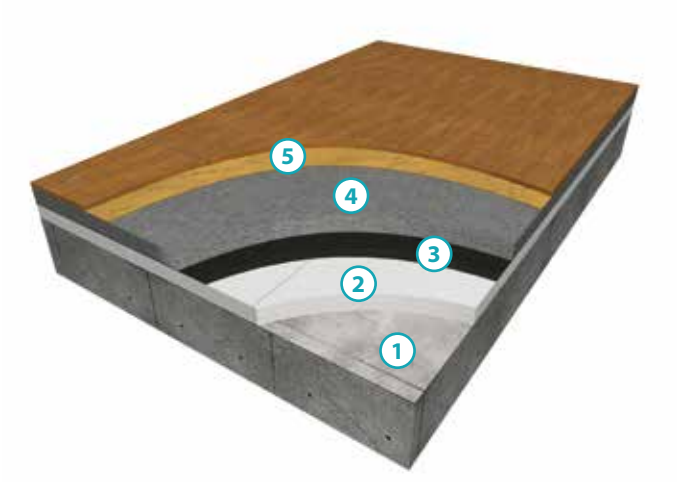


1. ATLAS EXPANSION JOINT PROFILE with apron
2. Floor finishing bead
3. Wall
4. Floor heating system
5. Floor top finish, e.g. ceramic tiles on ATLAS PLUS adhesive
6. Screed ATLAS SAM 150, ATLAS SAM 200, ATLAS POSTAR 20, ATLAS POSTAR 40, ATLAS POSTAR 80 and ATLAS POSTAR 100
7. Damp proofing, e.g. PE foil 0.2 mm thick
8. Thermal and acoustic insulation
9. Reinforced concrete slab

Cross - section of floor layers with the use of ATLAS products.



1. Concrete ceiling
2. Thermal or acoustic insulation
3. Heating system embedded in screed, applied on foil
4. Cement floor ATLAS POSTAR 80
5. ATLAS PLUS MEGA adhesive
6. Large size ceramic tiles
7. ATLAS ARTIS GROUT



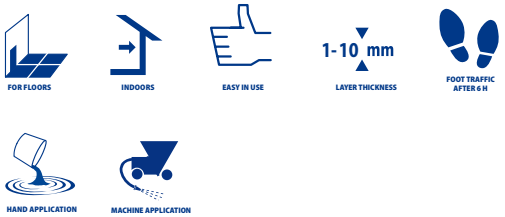
1. Concrete ceiling
2. Thermal or acoustic insulation
3. PE foil
4. Cement floor ATLAS POSTAR 80
5. Fixed parquet

TABLE 5.1

PRODUCT							
	ATLAS SAM 55	ATLAS SAM 100/ AVAL KN 10	ATLAS SAM 150	ATLAS SAM 200	ATLAS SWS/ ATLAS SAM 500	ATLAS SMS 15	ATLAS SMS 30
	Fast setting, self-leveling compound	Fast setting, self-leveling screed	Fast setting, self-leveling screed	Self-leveling screed	Fast setting, self-leveling screed	Fast setting, self-leveling compound	Fast setting, self-leveling screed
Reference document	PN-EN 13813:2003						
Classification	CA-C30-F5	CA-C35-F6	CA-C20-F5	CA-C16-F5	CA-C20-F4	CT-C25-F7	CT-C30-F7
TECHNICAL DATA							
Self-spreading	✓	✓	✓	✓	✓	✓	✓
Layer thickness [mm]	1-10	5-30	15-60	25-60	20-60	1-15	3-30
Mixing ratio water/dry mix [l/ 25 kg]	5.0-6.25	5.0-5.5	4.0 - 4.75	4.25-4.75	5.00-5.25	5.0-5.25	5.00-5.50
Consumption for 1 cm thickness [kg/m^2]	18	20	20	20	18	16.6	16.5
Compressive strength [N/mm^2]	≥30	≥35	≥20	≥16	≥20	≥25	≥30
Flexural strength [N/mm^2]	≥5	≥6	≥5	≥5	≥4	≥7	≥7
Abrasion resistance acc. to Bohm method							
Linear contraction [%]	< 0.03	< 0.03	< 0.03	< 0.03	< 0.05	<0.06	< 0.06
Foot traffic [h]	6	6	6	48	6	4	4
Tiles fixing [days]	3	14-21	21-28	21-28	21-28	1	1
Parquet fixing [days]]		21-28				7	7
Installation of panels or carpet flooring [days]	7-10	21-28	21-28	21-28	21-28	7	7
Start of heating (in screeds with heating) [days]			28	28	7		
Manual application	✓	✓	✓	✓	✓	✓	✓
Machine application (mixing-and-pumping units)	✓	✓	✓	✓	✓	✓	✓
SCREED TYPE							
Bonded	✓	✓	✓	✓	✓	✓	✓
On separation layer			✓	✓	✓		
Floating			✓	✓	✓		
With heating system			✓	✓	✓		
USE IN FLOOR STRUCTURE							
Smoothing layer	✓	✓				✓	✓
PLACE OF APPLICATION							
Indoors - dry	✓	✓	✓	✓	✓	✓	✓
Indoors - wet						✓	✓

ATLAS SAM 55 (1-10 mm)
fast setting, self-leveling compound

- anhydrite-gypsum based
- high compressive strength ≥ 30 N/mm²
- resistant to concentrated load
- almost contractionless – no need of expansion joints for up to 50 m²
- for large projects – well spreading and fast setting



Use

Levels surfaces within 1 - 10 mm thickness range – both when substrate has only local irregularities and when it is whole executed with slight slope.
Elevates floor level in the whole room – e.g. when necessary to equalize the level of two adjacent rooms.
Recommended for leveling surfaces of existing screeds with heating systems – when screed irregularities make the execution of top finish impossible and additional thin layer of compound must be applied.
Can be used in dry rooms – as the screed based on high quality anhydrite, it can only be used indoors in dry rooms: in living rooms, hallways, halls, salons, offices, corridors, waiting rooms, etc.
Forms screed beneath top finishes in rooms exposed to medium load – in offices, kindergartens, schools, etc.

Types of finishing layers – tiles, PVC and carpet flooring, floor panels.
Types of possible arrangements:
bonded - thickness 1 - 10 mm – on good quality substrates, e.g. concrete, cement or anhydrite screed (with or without floor heating).

Properties

Self-spreading - enables execution of smooth horizontal surfaces even in large rooms, with no use of battens and mass raking up with a darby.
Fast-setting - rapid strength build-up enables foot traffic just after 6 hours since the compound application.
Compressive strength: ≥ 30.0 N/mm².
Flexural strength: ≥ 5.0 N/mm².
Limited contraction – reduced to minimum possibility of shrinkage cracks during setting, which enables application on areas up to 50 m² large without expansion joints.
Suitable for manual and machine application – can be easily and quickly applied both manually and with machines equipped with helical pumps, therefore high efficiency is reached.

Technical data

ATLAS SAM 55 is manufactured as a dry mix based on high quality anhydrite, α-gypsum and Portland cement.

Bulk density (of dry mix)	approx. 1.30 kg/dm³
Mass bulk density (after mixing)	approx. 2.00 kg/dm³
Dry density (after setting)	approx. 1.85 kg/dm³
Mixing ratio (water/dry mix)	approx. 0.20 ÷ 0.25 l/1 kg approx. 5.00 ÷ 6.25 l/25 kg
Min./max. compound thickness	1 mm / 10 mm
Maximum aggregate size	0.5 mm
Linear changes	< 0.03%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life (between mass mixing until work end)	approx. 30 minutes*
Foot traffic	after 6 hours*
Full setting and drying	2 – 3 days*
Start of heating	after approx. 7 days*
Fixing the cladding	screed moisture not higher than 1.5% (in case of impermeable or wooden coverings follow the manufacturer's guidelines)

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

The product conforms to PN-EN 13813 standard. EC Declaration of Performance No. 091/CPR.

CE 0767	PN-EN 13813:2003 (EN 13813:2012)
Screed based on calcium sulphate CA-C30-F5	self-leveling, for indoor use, in dry rooms
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CA
pH value	> 7
Compressive strength	≥ 30.0 N/mm²
Flexural strength	≥ 5.0 N/mm²
Water permeability, vapour permeability, acoustic insulation, noise damping, heat resistance, chemical resistance	NPD

The product has been given the Radiation Hygiene Certificate.

Compound installation

Substrate preparation

The substrate should be stable and appropriately strong, due to the risk of mass outflow, should keep bath-like shape. General requirements for substrates:

- cement screeds – min. 28 days old,
- concrete – min. 3 months old,
- anhydrite screeds – mechanically grinded and dusted.

Substrate irregularities (cracks and gaps) should be primed with ATLAS UNI-GRUNT emulsion or ATLAS GRUNTO-PLAST mass and leveled with ATLAS ZW 330 mortar. Dry, fixed substrate should be dusted and thoroughly primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS emulsion (absorptive substrates), or ATLAS GRUNTO-PLAST mass (non-absorptive substrates) and left to dry.

Any steel elements in contact with compound should be protected against corrosion.

Expansion joints

Separate compound from walls and other elements with ATLAS EXPANSION JOINT PROFILES. The intermediate expansion joints are not required for areas up to 50 m^2 large and those of diagonal below 10 m. Any existing structural expansion joints should be transferred onto the compound layer. Contraction joints should be executed around load-bearing columns and at room thresholds.

Mass preparation

Machine application. Pour the mortar to the basket in the mixing-and-pumping unit, set the mix water level providing appropriate consistency of the mass leaving the hose.

Manual application. Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix, best with a low-speed mixer with a drill for gypsum, until homogenous. The mass is ready to use directly after mixing and keeps properties within approx. 30 minutes. Proper consistency should be verified by pouring the mass from 1 liter container onto an even, non-absorptive substrate (e.g. foil). It should form a "patch" of approx. 45 ÷ 50 cm diameter.

Mass application

The mass is poured mechanically with a mixing-and-pumping units, with continuous water flow and worm pump. ATLAS SAM 55 can also be poured manually, but only upon surfaces divided into application areas 10 ÷ 15 m^2 large. Before application, the future screed thickness is to be marked (on walls and in the application area), which can be done with, e.g. a level and portable height benchmarks. Pour the prepared mass evenly and continuously up to the desired height, avoid gaps. Just after filling an individual area, the mass has to be de-aerated with, e.g. de-aeration roller or a brush with long and hard hair. Move the brush shaking along and across the application area. This action facilitates the mass spreading and leveling. The application area should be filled, leveled and de-aerated within approx. 30 minutes.

Maintenance

Avoid direct sunlight and draughts, provide proper room ventilation within the first two days of compound setting. If white tarnish occurs on the screed surface, remove it mechanically with a grinder and dust the whole surface then. Grinding accelerates the process of compound drying. The time of drying depends on layer thickness as well as thermal and humidity conditions in a room.

Finishing works

Depending on the setting conditions, humidity, type and permeability of the top finish materials, the finishing works can commence after approx. 2-3 days. Prime the dry screed surface with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS before the work commencement.

Consumption

The average consumption is 18 kg of mortar for 1 m^2 for each 10 mm of layer thickness.

Important additional information

- Inappropriate amount of mix water results in deterioration of compound strength parameters and ingredients separation. Monitor the mass consistency and quality of mixing during compound application.
- Gradual heating of screed beneath the applied layer (by max. 3°C per day) can start only when the screed fully sets.
- Tools must be cleaned with clean water directly after use.
- Contains cement. Causes serious eye irritation. 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 IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Follow the instructions in 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 6 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

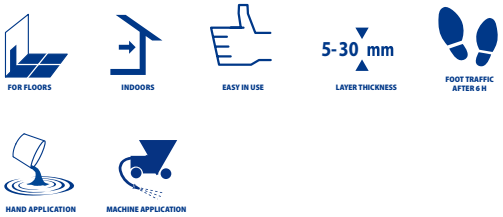
Packaging

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: 2014-05-27

ATLAS SAM 100 (5-30 mm)
fast setting, self-leveling screed

- anhydrite-gypsum based
- high compressive strength ≥ 35.0 N/mm²
- resistant to concentrated load
- almost contractionless – no need of expansion joints for up to 50 m²
- under tiles, carpet flooring, parquet, panels



Use

Levels surfaces within 5 - 30 mm thickness range – both when substrate has only local irregularities and when it is whole executed with slight slope.
Elevates floor level in the whole room – e.g. when necessary to equalize the level of two adjacent rooms.
Recommended for leveling surfaces of existing screeds with heating systems – when screed irregularities make the execution of top finish impossible and additional thin layer of compound must be applied.
Can be used in dry rooms – as the screed based on high quality anhydrite, it can only be used indoors in dry rooms: in living rooms, hallways, halls, salons, offices, corridors, waiting rooms, etc.
Forms screed beneath top finishes in rooms exposed to medium load – in offices, kindergartens, schools, etc.

Types of finishing layers – tiles, PVC and carpet flooring, floor panels.
Types of possible arrangements:
bonded - thickness 5 - 30 mm – on good quality substrates, e.g. concrete, cement or anhydrite screed (with or without floor heating).

Properties

Self-spreading – enables execution of smooth horizontal surfaces even in large rooms, with no use of battens and mass raking up with a darby.
Fast-setting - rapid strength build-up enables foot traffic just after 6 hours since the compound application.
Compressive strength: ≥ 35.0 N/mm².
Flexural strength: ≥ 6.0 N/mm².
Limited contraction – reduced to minimum possibility of shrinkage cracks during setting, which enables application on areas up to 50 m² large without expansion joints.
Suitable for manual and machine application – can be easily and quickly applied both manually and with machines equipped with helical pumps, therefore high efficiency is reached.

Technical data

ATLAS SAM 100 is manufactured as a dry mix based on high quality anhydrite powder, α-gypsum and Portland cement.

Bulk density (of dry mix)	approx. 1.30 kg/dm³
Mass bulk density (after mixing)	approx. 2.10 kg/dm³
Dry density (after setting)	approx. 1.95 kg/dm³
Mixing ratio (water/dry mix)	approx. 0.20 ÷ 0.22 l/1 kg approx. 5.00 ÷ 5.50 l/25 kg
Min./max. screed thickness	5 mm / 30 mm
Maximum aggregate size	0.8 mm
Linear changes	< 0.03%
Resistance to shearing forces (after 28 days)	> 0.8 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life (between mass mixing until work end)	min. 30 minutes*
Foot traffic	after 6 hours*
Full setting and drying	min. 2 weeks*
Start of heating	after approx. 7 days*
Fixing the cladding	screed moisture not higher than 1.5% (in case of impermeable or wooden coverings follow the manufacturer's guidelines)

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

The product conforms to PN-EN 13813 standard. EC Declaration of Performance No. 069/CPR.

CE 0767	PN-EN 13813:2003 (EN 13813:2012)
Screed based on calcium sulphate CA-C35-F6	self-leveling, for indoor use, in dry rooms
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CA
pH value	> 7
Compressive strength	≥ 35.0 N/mm²
Flexural strength	≥ 6.0 N/mm²
Water permeability, vapour permeability, acoustic insulation, noise damping, heat resistance, chemical resistance	NPD

The product has been given the Radiation Hygiene Certificate.

Screed installation

Substrate preparation

The substrate should be stable and appropriately strong, due to the risk of mass outflow, should keep bath-like shape. General requirements for substrates:

- cement screeds – min. 28 days old,
- concrete – min. 3 months old,
- anhydrite screeds – mechanically grinded and dusted.

Substrate irregularities (cracks and gaps) should be primed with ATLAS UNI-GRUNT emulsion or ATLAS GRUNTO-PLAST mass and leveled with ATLAS ZW 330 mortar. Dry, fixed substrate should be dusted and thoroughly primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS emulsion (absorptive substrates), or ATLAS GRUNTO-PLAST mass (non-absorptive substrates) and left to dry.

Any steel elements in contact with screed should be protected against corrosion.

Expansion joints

Separate screed from walls and other elements with ATLAS EXPANSION JOINT PROFILES. The intermediate expansion joints are not required for areas up to 50 m^2 large and those of diagonal below 10 m. Any existing structural expansion joints should be transferred onto the screed layer. Contraction joints should be executed around load-bearing columns and at room thresholds.

Mass preparation

Machine application. Pour the mortar to the basket in the mixing-and-pumping unit, set the mix water level providing appropriate consistency of the mass leaving the hose.

Manual application. Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix, best with a low-speed mixer with a drill for gypsum, until homogenous. The mass is ready to use directly after mixing and keeps properties within approx. 30 minutes. Proper consistency should be verified by pouring the mass from 1 liter container onto an even, non-absorptive substrate (e.g. foil). It should form a "patch" of approx. 45 ÷ 50 cm diameter.

Mass application

The mass is poured mechanically with a mixing-and-pumping units, with continuous water flow and worm pump. ATLAS SAM 100 can also be poured manually, but only upon surfaces divided into application areas 10 ÷ 15 m^2 large. Before application, the future screed thickness is to be marked (on walls and in the application area), which can be done with, e.g. a level and portable height benchmarks. Pour the prepared mass evenly and continuously up to the desired height, avoid gaps. Just after filling an individual area, the mass has to be de-aerated with, e.g. de-aeration roller or a brush with long and hard hair. Move the brush shaking along and across the application area. This action facilitates the mass spreading and leveling. The application area should be filled, leveled and de-aerated within approx. 30 minutes.

Maintenance

Avoid direct sunlight and draughts, provide proper room ventilation within the first two days of screed setting. If white tarnish occurs on the screed surface, remove it mechanically with a grinder and dust the whole surface then. Grinding accelerates the process of screed drying. The time of drying depends on layer thickness as well as thermal and humidity conditions in a room.

Finishing works

Depending on the setting conditions, humidity, type and permeability of the top finish materials, the finishing works can commence after approx. 2-3 weeks. Prime the dry screed surface with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS before the work commencement,

Consumption

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

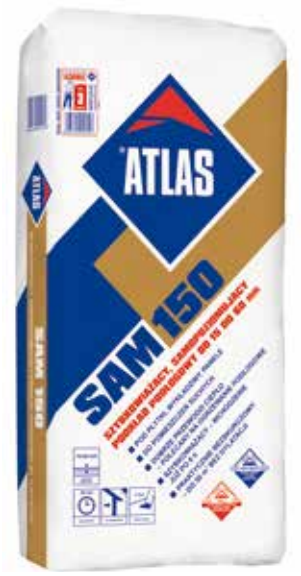
Important additional information

- Inappropriate amount of mix water results in deterioration of screed strength parameters and ingredients separation. Monitor the mass consistency and quality of mixing during screed application.
- Gradual heating of screed beneath the applied layer (by max. 3°C per day) can start only when the screed fully sets.
- Tools must be cleaned with clean water directly after use.
- Contains cement. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Keep out of reach of children. Avoid breathing dust. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Follow the instructions in 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 9 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

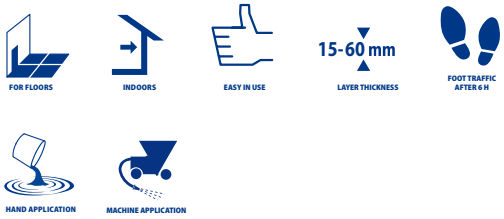
Foil bags: 25 kg
Pallet: 1,050 kg in 25 kg bags

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: 2015-04-24



ATLAS SAM 150 (15-60 mm)
fast setting, self-leveling screed

- anhydrite-gypsum based
- fast setting – foot traffic just after 6 hours
- almost contractionless – no need of expansion joints for up to 50 m²
- conducts heat well – perfect for floor heating
- self-leveling – facilitates application



Use

Levels surfaces within 15 - 60 mm thickness range – both when substrate has only local irregularities and when it is whole executed with slight slope.
Elevates floor level in the whole room – e.g. when necessary to equalize the level of two adjacent rooms.
Perfect for installation of electric or water floor heating system – very good heat conductivity, better than offered by cement-based products; tightly covers heating installation.
For leveling surfaces of existing screeds with heating systems – when screed irregularities make the execution of top finish impossible and additional thin layer of compound must be applied.
Element of the acoustic insulation system for ceilings – in combination with elasticized polystyrene, ATLAS EXPANSION JOINT PROFILES and polyethylene foil.
Can be used in dry rooms – as the screed based on high quality anhydrite, it can only be used indoors in dry rooms: in living rooms, hallways, halls, salons, offices, corridors, waiting rooms, etc.

Types of finishing layers – tiles, PVC and carpet flooring, floor panels.
Types of possible arrangements:
bonded - thickness 15 - 60 mm – on good quality substrates, e.g. concrete, cement or anhydrite screed (with or without floor heating)
on separation layer - thickness 30 - 60 mm – on poor quality substrates, which do not provide appropriate bonding - dusty, cracked, oiled, dirty, very absorbable; separation layer can be made of, e.g. PE foil 0.2 mm thick
floating - thickness 35 - 60 mm – applied on thermal or acoustic insulation layer made of: polystyrene boards of appropriate hardness, hardened mineral wool panels, etc.
heating – the layer above the heating layer should be **min. 35 mm thick**

Properties

Self-spreading – enables execution of smooth horizontal surfaces even in large rooms, with no use of battens and mass raking up with a darby.
Compressive strength: ≥ 20.0 N/mm².
Flexural strength: ≥ 5.0 N/mm².
Limited contraction – reduced to minimum possibility of shrinkage cracks during setting, which enables application on areas up to 50 m² large without expansion joints.
Suitable for manual and machine application – can be easily and quickly applied both manually and with machines equipped with helical pumps, therefore high efficiency is reached.

Technical data

ATLAS SAM 150 is manufactured as a dry mix based on high quality anhydrite.

Bulk density (of dry mix)	approx. 1.40 kg/dm³
Mass bulk density (after mixing)	approx. 2.20 kg/dm³
Dry density (after setting)	approx. 2.00 kg/dm³
Mixing ratio (water/dry mix)	approx. 0.16 ÷ 0.19 l/1 kg approx. 4.00 ÷ 4.75 l/25 kg
Min./max. screed thickness	15 mm / 60 mm
Maximum aggregate size	0.8 mm
Linear changes	< 0.03%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life (between mass mixing until work end)	min. 30 minutes*
Foot traffic	after 6 hours*
Full setting and drying	3-4 weeks*
Start of heating	after approx. 28 days*
Fixing the cladding	screed moisture not higher than 1.5% (in case of impermeable or wooden coverings follow the manufacturer's guidelines)

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

The product conforms to PN-EN 13813 standard. EC Declaration of Performance No. 044/CPR.

CE 0767	PN-EN 13813:2003 (EN 13813:2012)
Screed based on calcium sulphate CA-C20-F5	self-leveling, for indoor use, in dry rooms
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CA
pH value	> 7
Compressive strength	≥ 20.0 N/mm²
Flexural strength	≥ 5.0 N/mm²
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 Radiation Hygiene Certificate.

Screed installation

Substrate preparation

The substrate should be stable and appropriately strong, due to the risk of mass outflow, should keep bath-like shape. General requirements for substrates:

- cement screeds – min. 28 days old,
- concrete – min. 3 months old,
- anhydrite screeds – mechanically grinded and dusted.

Any steel elements in contact with screed should be protected against corrosion.

Bonded screed. Substrate irregularities (cracks and gaps) should be primed with ATLAS UNI-GRUNT emulsion or ATLAS GRUNTO-PLAST mass and leveled with ATLAS ZW 330 mortar. Dry, fixed substrate should be dusted and thoroughly primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS emulsion (absorptive substrates), or ATLAS GRUNTO-PLAST mass (non-absorptive substrates) and left to dry.

Screed on separation layer. The separation layer, e.g. PE foil, must be spread tightly, without wrinkles and folded onto the walls (upon the expansion joint strips) at least to the height of the screed.

Floating screed. The insulation boards must be placed tightly with offset edges upon even surface. Place the separation layer upon the boards and fold it onto the wall.

Screed with heating system. The heating installation must be checked and fixed, fill up the pipes of water heating system with water. The screed should be installed with one layer (when the heating installation is firmly fixed). Follow guidelines listed in the project documentation and recommendations of the heating system manufacturer.

Expansion joints

Separate screed from walls and other elements with ATLAS EXPANSION JOINT PROFILES. The intermediate expansion joints are not required for areas up to 50 m^2 large and those of diagonal below 10 m. Any existing structural expansion joints should be transferred onto the screed layer. Contraction joints should be executed around load-bearing columns and at room thresholds.

Mass preparation

Machine application. Pour the mortar to the basket in the mixing-and-pumping unit, set the mix water level providing appropriate consistency of the mass leaving the hose.

Manual application. Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix, best with a low-speed mixer with a drill for gypsum, until homogenous. The mass is ready to use directly after mixing and keeps properties within approx. 30 minutes. Proper consistency should be verified by pouring the mass from 1 liter container onto an even, non-absorptive substrate (e.g. foil). It should form a "patch" of approx. 45 ÷ 50 cm diameter.

Mass application

The mass is poured mechanically with a mixing-and-pumping units, with continuous water flow and worm pump. ATLAS SAM 150 can also be poured manually, but only upon surfaces divided into application areas 10 ÷ 15 m^2 large. Before application, the future screed thickness is to be marked (on walls and in the application area), which can be done with, e.g. a level and portable height benchmarks. Pour the prepared mass evenly and continuously up to the desired height, avoid gaps. Just after filling an individual area, the mass has to be de-aerated with, e.g. de-aeration roller or a brush with long and hard hair. Move the brush shaking along and across the application area. This action facilitates the mass spreading and leveling. The application area should be filled, leveled and de-aerated within approx. 30 minutes.

Maintenance

Avoid direct sunlight and draughts, provide proper room ventilation within the first two days of screed setting. If white tarnish occurs on the screed surface, remove it mechanically with a grinder and dust the whole surface then. Grinding accelerates the process of screed drying. The time of drying depends on layer thickness as well as thermal and humidity conditions in a room.

Finishing works

Depending on the setting conditions, humidity, type and permeability of the top finish materials, the finishing works can commence after approx. 3-4 weeks. Prime the dry screed surface with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS before the work commencement,

Consumption

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

Important additional information

- Inappropriate amount of mix water results in deterioration of screed strength parameters and ingredients separation. Monitor the mass consistency and quality of mixing during screed application.
- Until the floor heating is fully turned on, temperature should be increased every 24 hours by maximum 2°C till the maximum operation temperature is achieved. The temperature should then be lowered at the same rate until the heating is turned off.
- Gradual heating of screed beneath the applied layer (by max. 3°C per day) can start only when the screed fully sets.
- Tools must be cleaned with clean water directly after use.
- Contains cement. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Keep out of reach of children. Avoid breathing dust. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Follow the instructions in 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 6 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

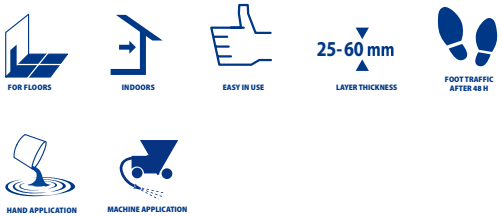
Packaging

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: 2014-05-27

ATLAS SAM 200 (25-60 mm)
self-leveling screed

- anhydrite-gypsum based
- almost contractionless – no need of expansion joints for up to 50 m²
- adjustable applied mass consistency
- conducts heat well – perfect for floor heating
- self-leveling – facilitates application



Use

Levels surfaces within 25 - 60 mm thickness range – both when substrate has only local irregularities and when it is whole executed with slight slope.
Elevates floor level in the whole room – e.g. when necessary to equalize the level of two adjacent rooms.
Perfect for installation of electric or water floor heating system – very good heat conductivity, better than offered by cement-based products; tightly covers heating installation.
For leveling surfaces of existing screeds with heating systems.
Element of the acoustic insulation system for ceilings – in combination with elasticized polystyrene, ATLAS EXPANSION JOINT PROFILES and polyethylene foil.
Can be used in dry rooms – as the screed based on high quality anhydrite, it can only be used indoors in dry rooms: in living rooms, hallways, halls, salons, offices, corridors, waiting rooms, etc.

Types of finishing layers – – tiles, PVC and carpet flooring, floor panels.
Types of possible arrangements:
bonded - thickness 25 - 60 mm – on good quality substrates, e.g. concrete, cement or anhydrite screed (with or without floor heating)
on separation layer - thickness 30 - 60 mm – on poor quality substrates, which do not provide appropriate bonding - dusty, cracked, oiled, dirty, very absorbable; separation layer can be made of, e.g. PE foil 0.2 mm thick
floating - thickness 35 - 60 mm – applied on thermal or acoustic insulation layer made of: polystyrene boards of appropriate hardness, hardened mineral wool panels, etc.
heating – the layer above the heating layer should be **min. 35 mm thick**

Properties

Self-spreading – enables execution of smooth horizontal surfaces even in large rooms, with no use of battens and mass raking up with a darby.
Compressive strength: ≥ 16.0 N/mm².
Flexural strength: ≥ 5.0 N/mm².
Limited contraction – reduced to minimum possibility of shrinkage cracks during setting, which enables application on areas up to 50 m² large without expansion joints.
Suitable for manual and machine application – can be easily and quickly applied both manually and with machines equipped with helical pumps, therefore high efficiency is reached.

Technical data

ATLAS SAM 200 is manufactured as a dry mix based on high quality anhydrite.

Bulk density (of dry mix)	approx. 1.40 kg/dm³
Mass bulk density (after mixing)	approx. 2.00 kg/dm³
Dry density (after setting)	approx. 1.90 kg/dm³
Mixing ratio (water/dry mix)	approx. 0.17 ÷ 0.19 l/1 kg approx. 4.25 ÷ 4.75 l/25 kg
Min./max. screed thickness	25 mm / 60 mm
Maximum aggregate size	0.8 mm
Linear changes	< 0.03%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life (between mass mixing until work end)	approx. 45 minutes*
Foot traffic	after 2 days*
Full setting and drying	3-4 weeks*
Start of heating	after approx. 28 days*
Fixing the cladding	screed moisture not higher than 1.5% (in case of impermeable or wooden coverings follow the manufacturer's guidelines)

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

The product conforms to PN-EN 13813 standard. EC Declaration of Performance No. 010/CPR.

CE	PN-EN 13813:2003 (EN 13813:2012)
Screed based on calcium sulphate CA-C16-F5	self-leveling, for indoor use, in dry rooms
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CA
pH value	> 7
Compressive strength	≥ 20.0 N/mm²
Flexural strength	≥ 5.0 N/mm²
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 Radiation Hygiene Certificate.

Screed installation

Substrate preparation

The substrate should be stable and appropriately strong, due to the risk of mass outflow, should keep bath-like shape. General requirements for substrates:

- cement screeds – min. 28 days old,
- concrete – min. 3 months old,
- anhydrite screeds – mechanically grinded and dusted.

Any steel elements in contact with screed should be protected against corrosion.

Bonded screed. Substrate irregularities (cracks and gaps) should be primed with ATLAS UNI-GRUNT emulsion or ATLAS GRUNTO-PLAST mass and leveled with ATLAS ZW 330 mortar. Dry, fixed substrate should be dusted and thoroughly primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS emulsion (absorptive substrates), or ATLAS GRUNTO-PLAST mass (non-absorptive substrates) and left to dry.

Screed on separation layer. The separation layer, e.g. PE foil, must be spread tightly, without wrinkles and folded onto the walls (upon the expansion joint strips) at least to the height of the screed.

Floating screed. The insulation boards must be placed tightly with offset edges upon even surface. Place the separation layer upon the boards and fold it onto the wall.

Screed with heating system. The heating installation must be checked and fixed, fill up the pipes of water heating system with water. The screed should be installed with one layer (when the heating installation is firmly fixed). Follow guidelines listed in the project documentation and recommendations of the heating system manufacturer.

Expansion joints

Separate screed from walls and other elements with ATLAS EXPANSION JOINT PROFILES. The intermediate expansion joints are not required for areas up to 50 m^2 large and those of diagonal below 10 m. Any existing structural expansion joints should be transferred onto the screed layer. Contraction joints should be executed around load-bearing columns and at room thresholds.

Mass preparation

Machine application. Pour the mortar to the basket in the mixing-and-pumping unit, set the mix water level providing appropriate consistency of the mass leaving the hose.

Manual application. Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix, best with a low-speed mixer with a drill for gypsum, until homogenous. The mass is ready to use directly after mixing and keeps properties within approx. 30 minutes. Proper consistency should be verified by pouring the mass from 1 liter container onto an even, non-absorptive substrate (e.g. foil). It should form a "patch" of approx. 45 ÷ 50 cm diameter.

Mass application

The mass is poured mechanically with a mixing-and-pumping units, with continuous water flow and worm pump. ATLAS SAM 200 can also be poured manually, but only upon surfaces divided into application areas 10 ÷ 15 m^2 large. Before application, the future screed thickness is to be marked (on walls and in the application area), which can be done with, e.g. a level and portable height benchmarks. Pour the prepared mass evenly and continuously up to the desired height, avoid gaps. Just after filling an individual area, the mass has to be de-aerated with, e.g. de-aeration roller or a brush with long and hard hair. Move the brush shaking along and across the application area. This action facilitates the mass spreading and leveling. The application area should be filled, leveled and de-aerated within approx. 30 minutes.

Maintenance

Avoid direct sunlight and draughts, provide proper room ventilation within the first two days of screed setting. If white tarnish occurs on the screed surface, remove it mechanically with a grinder and dust the whole surface then. Grinding accelerates the process of screed drying. The time of drying depends on layer thickness as well as thermal and humidity conditions in a room.

Finishing works

Depending on the setting conditions, humidity, type and permeability of the top finish materials, the finishing works can commence after approx. 3-4 weeks. Prime the dry screed surface with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS before the work commencement,

Consumption

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

Important additional information

- Inappropriate amount of mix water results in deterioration of screed strength parameters and ingredients separation. Monitor the mass consistency and quality of mixing during screed application.
- Until the floor heating is fully turned on, temperature should be increased every 24 hours by maximum 2°C till the maximum operation temperature is achieved. The temperature should then be lowered at the same rate until the heating is turned off.
- Gradual heating of screed beneath the applied layer (by max. 3°C per day) can start only when the screed fully sets.
- Tools must be cleaned with clean water directly after use.
- Contains cement. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Keep out of reach of children. Avoid breathing dust. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Follow the instructions in 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 9 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

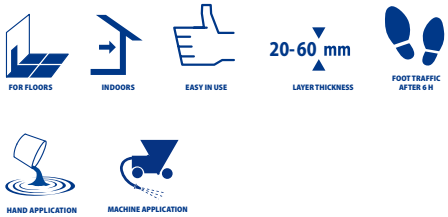
Packaging

Foil 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: 2015-03-27

ATLAS SAM 500 (20-60 mm)
fast setting, self-leveling screed

- under tiles, carpet flooring and panels
- fast setting – foot traffic just after 6 hours
- almost contractionless – no need of expansion joints for up to 50 m²
- conducts heat well – perfect for floor heating



Use

Levels surfaces within 20 - 60 mm thickness range – both when substrate has only local irregularities and when it is whole executed with slight slope.
Perfect for installation of electric or water floor heating system – very good heat conductivity, better than offered by cement-based products; tightly covers heating installation. Heats up quick after installation activation.
Elevates floor level in the whole room – e.g. when necessary to equalize the level of two adjacent rooms.
Can be used in dry rooms – as the screed based on high quality anhydrite, it can only be used indoors in dry rooms: in living rooms, hallways, halls, salons, offices, corridors, waiting rooms, etc.
Recommended for offices, kindergartens, schools, apartments, etc. – owing to smooth surface and fine aggregate.

Types of finishing layers – tiles, PVC and carpet flooring, floor panels.
Types of possible arrangements:
- **bonded - thickness 20 - 60 mm** – on good quality substrates, e.g. concrete, cement or anhydrite screed (with or without floor heating)
- **on separation layer - thickness 30 - 60 mm** – on poor quality substrates, which do not provide appropriate bonding - dusty, cracked, oiled, dirty, very absorbable; separation layer can be made of, e.g. PE foil 0.2 mm thick
- **floating - thickness 35 - 60 mm** – applied on thermal or acoustic insulation layer made of: polystyrene boards of appropriate hardness, hardened mineral wool panels, etc.
- **heating** – the layer above the heating layer should be **min. 35 mm thick.**

Properties

Perfect self-spreadability – enables execution of smooth horizontal surfaces even in large rooms, with no use of battens and mass raking up with a darby.
Fast-setting - rapid strength build-up enables foot traffic just after 6 hours since the screed application.
Compressive strength: ≥ 20.0 N/mm².
Flexural strength: ≥ 4.0 N/mm².
Suitable for manual and machine application – can be easily and quickly applied both manually and with machines equipped with helical pumps, therefore high efficiency is reached.

Technical data

ATLAS SAM 500 is manufactured as a dry mix based on calcium sulphate.

Bulk density (of dry mix)	approx.. 1.40 kg/dm³
Mixing ratio (water/dry mix)	approx. 0.20 ÷ 0.21 l/1 kg approx. 5.00 ÷ 5.25 l/25 kg
Min./max. screed thickness	20 mm / 60 mm
Maximum aggregate size	2.0 mm
Linear changes	< 0.05%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life (between mass mixing until work end)	approx. 60 minutes*
Foot traffic	after 6 hours*
Start of heating	after approx. 7 days*
Fixing the cladding	screed moisture not higher than 1.5% (in case of impermeable or wooden coverings follow the manufacturer's guidelines)

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

The product conforms to PN-EN 13813 standard. EC Declaration of Performance No. 193/CPR.

CE	PN-EN 13813:2003 (EN 13813:2002)
Screed based on calcium sulphate CA-C20-F4	self-leveling, for indoor use, in dry rooms
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CA
pH value	≥ 7
Compressive strength – class	C20
Flexural strength - class	F4
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 Radiation Hygiene Certificate.

Screed installation

Substrate preparation

The substrate should be stable and appropriately strong, due to the risk of mass outflow, should keep bath-like shape. General requirements for substrates:

- cement screeds – min. 28 days old,
- concrete – min. 3 months old,
- anhydrite screeds – mechanically grinded and dusted.

Bonded screed. Substrate irregularities (cracks and gaps) should be primed with ATLAS UNI-GRUNT emulsion or ATLAS GRUNTO-PLAST mass and leveled with ATLAS ZW 330, ATLAS ZW 50 or ATLAS TEN-10 mortar. Dry, fixed substrate should be dusted and thoroughly primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS emulsion (absorptive substrates), or ATLAS GRUNTO-PLAST mass (non-absorptive substrates) and left to dry.

Screed on separation layer. The separation layer, e.g. PE foil, must be spread tightly, without wrinkles and folded onto the walls (upon the expansion joint strips) at least to the height of the screed.

Floating screed. The insulation boards must be placed tightly with offset edges upon even surface. Place the separation layer upon the boards and fold it onto the wall.

Screed with heating system. The heating installation must be checked and fixed, fill up the pipes of water heating system with water. The screed should be installed with one layer (when the heating installation is firmly fixed). Follow guidelines listed in the project documentation and recommendations of the heating system manufacturer.

Expansion joints

Separate screed from walls and other elements with ATLAS EXPANSION JOINT PROFILES. The intermediate expansion joints are not required for areas up to 50 m^2 large and those of diagonal below 10 m. Any existing structural expansion joints should be transferred onto the screed layer. Contraction joints should be executed around load-bearing columns and at room thresholds.

Mass preparation

Machine application. Pour the mortar to the basket in the mixing-and-pumping unit, set the mix water level providing appropriate consistency of the mass leaving the hose.

Manual application. Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix, best with a low-speed mixer with a drill for gypsum, until homogenous. The mass is ready to use directly after mixing and keeps properties within approx. 30 minutes. Proper consistency should be verified by pouring the mass from 1 liter container onto an even, non-absorptive substrate (e.g. foil). It should form a "patch" of approx. 45 ÷ 50 cm diameter.

Mass application

The mass is poured mechanically with a mixing-and-pumping units, with continuous water flow and worm pump. ATLAS SAM 500 can also be poured manually, but only upon surfaces divided into application areas 10 ÷ 15 m^2 large. Pour the prepared mass evenly and continuously up to the desired height, avoid gaps. Just after filling an individual area, the mass has to be de-aerated with, e.g. a brush with long and hard hair or with a stippler. Move the brush shaking along and across the application area. This action facilitates the mass spreading and leveling. The application area should be filled, leveled and de-aerated within approx. 60 minutes.

Maintenance

Avoid direct sunlight and draughts, provide proper room ventilation within the first two days of screed setting. If white tarnish occurs on the screed surface, remove it mechanically with a grinder and dust the whole surface then. Grinding accelerates the process of screed drying. The time of drying depends on layer thickness as well as thermal and humidity conditions in a room.

Finishing works

Depending on the setting conditions, humidity, type and permeability of the top finish materials, the finishing works can commence after approx. 3-4 weeks. Prime the dry screed surface with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS before the work commencement.

Consumption

The average consumption is 18 kg of mortar for 1 m^2 for each 10 mm of layer thickness.

Important additional information

- Inappropriate amount of mix water results in deterioration of screed strength parameters and ingredients separation. Monitor the mass consistency and quality of mixing during screed application.
- Until the floor heating is fully turned on, temperature should be increased every 24 hours by maximum 2°C till the maximum operation temperature is achieved. The temperature should then be lowered at the same rate until the heating is turned off.
- Gradual heating of screed beneath the applied layer (by max. 3°C per day) can start only when the screed fully sets.
- Tools must be cleaned with clean water directly after use.
- Due to its form – dust, product can mechanically irritate eyes and respiratory system. 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), avoid direct sunshine, keep in dry, cool and well ventilated room. Protect against humidity – product gets irreversibly solid after contact with damp. Shelf life in conditions as specified is 9 months from the production date shown on the packaging.

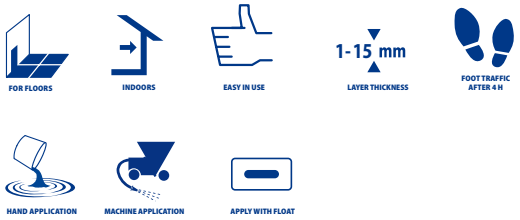
Packaging

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: 2016-06-22

ATLAS SMS 15 (1-15 mm)
fast setting, self-leveling compound

- under tiles, panels, carpet flooring, parquet
- foot traffic just after 4 hours
- tiling after 24 hours
- high compressive and flexural strength
- low linear contraction



Use

Levels surfaces within 1 - 15 mm thickness range - both when substrate has only local irregularities and when it is whole executed with slight slope.
Elevates floor level in the whole room – e.g. when necessary to equalize the level of two adjacent rooms.
Can be used in rooms, antechambers, halls, living rooms, offices, corridors, waiting rooms, kitchens and bathrooms.
Recommended for leveling surfaces of existing screeds with heating systems – when screed irregularities make the execution of top finish impossible and additional thin layer of compound must be applied.
Forms very smooth surface after application – particularly recommended as smoothing layer for screeds installed under carpet flooring.

Types of finishing layers – tiles, PVC and carpet flooring, floor panels, parquet.
Types of possible arrangements:
- **bonded - thickness 1 - 15 mm** – on good quality substrates, e.g. concrete, cement screed (with or without floor heating).

Properties

Perfect spreading - enables execution of horizontal surfaces even in large rooms, with no use of battens and mass raking up with a darby.
Fast-setting - rapid strength build-up enables foot traffic just after 4 hours since the compound application.
Compressive strength: ≥ 25.0 N/mm².
Flexural strength: ≥ 7.0 N/mm².
Very low linear shrinkage - minimum changes in linear dimensions during screed drying (≤ 0.6 mm/rm) limit the risk of cracking and loosening of weak substrates (of low cohesion).
Suitable for manual and machine application – can be easily and quickly applied both manually and with machines equipped with helical pumps, therefore high efficiency is reached.

Technical data

ATLAS SMS 15 is manufactured as a dry mix based on cement.

Bulk density (of dry mix)	approx. 1.20 kg/dm^3
Mass bulk density (after mixing)	approx. 2.00 kg/dm^3
Dry density (after setting)	approx. 1.80 kg/dm^3
Mixing ratio (water/dry mix)	0.20 ÷ 0.21 l/1 kg 5.00 ÷ 5.25 l/25 kg
Min./max. compound thickness	1 mm / 15 mm
Maximum aggregate size	0.5 mm
Linear changes	≤ 0.06%
Resistance to shearing forces (after 28 days)	≥ 1.0 MPa
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life (between mass mixing until work end)	approx. 40 minutes*
Foot traffic	after 4-6 hours*
Fixing ceramic and stone cladding	after 24 hours*
Application of carpet, PVC flooring, linoleum, parquet	after approx. 7 days

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

The product conforms to PN-EN 13813 standard. EC Declaration of Performance No. 162/CPR.

CE	PN-EN 13813:2003 (EN 13813:2012)
Cement – based screed CT-C25-F7	self-leveling, for indoor use
Reaction to fire – class	A1$_{fl}$
Corrosive substance release	CT
Compressive strength – class	C25
Flexural strength - class	F7
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 Radiation Hygiene Certificate.

Compound application

Substrate preparation

The substrate should be stable, sound and air dry, due to the risk of mass outflow, should keep bath-like shape. General requirements for substrates:

- cement screeds – min. 28 days old,
- concrete – min. 3 months old.

Substrate irregularities (cracks and gaps) should be leveled with ATLAS ZW 330 mortar. Dry, fixed substrate should be dusted and thoroughly primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS emulsion and left to dry.

Expansion joints

Separate screed from walls with ATLAS EXPANSION JOINT PROFILES. 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 compound layer.

Mass preparation

Machine application – use mixing-and-pumping units with continuous flow of water. It is advisable to use pumps of efficiency 60 l/min. Pour the dry mix to the basket in the mixing-and-pumping unit, set the mix water level providing appropriate mass consistency. Proper consistency can be verified with the use of 0.5 liter or 1 liter container. The prepared mix, poured from a 0.5 liter container onto even, non-absorptive substrate (e.g. foil) should form a "patch" of approx. 35 ÷ 40 cm diameter (for 1.0 liter container - 50 ÷ 55 cm).

Manual application – pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix, best with a low-speed mixer with a drill for mortars, until homogenous. Remix after 5 minutes. The mass retains its properties for about 40-50 minutes. Proper consistency should be verified by pouring the mass from 1 liter container onto an even, non-absorptive substrate (e.g. foil). It should form a "patch" of approx. 50 ÷ 55 cm diameter.

Compound application

Before application, the future compound thickness is to be marked (on walls and in the application area), which can be done with, e.g. a level and portable height benchmarks. Pour the prepared mass evenly and continuously up to the desired height, avoid gaps. The application area should be arranged in the way allowing for mass application and de-aeration within approx. 40 minutes.

In case of manual application the excessive mass should be raked up towards oneself with a long metal float. Directly after each application area filling, the mass must be de-aerated with, e.g. a spike roller. It is recommended to perform de-aeration in two perpendicular directions just after the mass application.

Maintenance

The freshly applied compound should be protected against excessive drying, direct sunlight, low air humidity or draughts. In order to ensure favourable conditions for compound 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 depends on layer thickness and ambient thermal and humidity conditions. Foot traffic is possible after approx. 4-6 hours and full load after approx. 7 days.

Finishing works

The time of finishing works execution depends on the setting conditions, humidity, type and permeability of the top finish materials and can commence after approx. 24 hours in case of tiling. PVC flooring can be installed when the screed dries fully. Parquet can be installed after approx. 7 days. Minimum compound thickness beneath parquet – 3 mm. Epoxy coats should be applied according to their manufacturer's guidelines (e.g. on substrate preparation, ambient conditions, etc.), however not earlier than after 7 days.

Prime the surface with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS before fixing the cladding.

Consumption

The average consumption is 16.6 kg of mortar for 1 m^2 for each 10 mm of layer thickness.

Important additional information

- Inappropriate amount of mix water results in deterioration of screed strength parameters and ingredients separation. Monitor the mass consistency and quality of mixing during screed application.
- Tools must be cleaned with clean water directly after use.
- Contains cement. 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 in 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 9 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%..

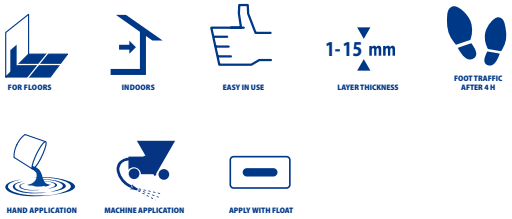
Packaging

Foil 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: 2016-03-24

ATLAS SMS 30 (3-30 mm)
fast setting, self-leveling screed

- under parquet, tiles, panels, carpet flooring
- foot traffic just after 4 hours
- for leveling floors during renovation
- limited linear contraction



Use

Levels surfaces within 3 - 30 mm thickness range - both when substrate has only local irregularities and when it is whole executed with slight slope.
Elevates floor level in the whole room – e.g. when necessary to equalize the level of two adjacent rooms.
Can be used in dry rooms – in living rooms, antechambers, halls, offices, corridors, waiting rooms, etc.
Can be used in rooms of higher humidity, e.g. house bathrooms.
Recommended as a screed under carpet flooring in offices, kindergartens, schools, apartments, etc. – owing to smooth surface and fine aggregate.

Types of finishing layers – tiles, PVC and carpet flooring, floor panels, parquet.
Types of possible arrangements:
bonded - thickness 3 - 30 mm – on good quality substrates, e.g. concrete, cement or anhydrite screed (with or without floor heating).

Properties

Perfect spreading - enables execution of smooth horizontal surfaces even in large rooms, with no use of battens and mass raking up with a darby.
Fast-setting - rapid strength build-up enables foot traffic just after 4 hours since application.
Compressive strength: ≥ 30.0 N/mm².
Flexural strength: ≥ 7.0 N/mm².
Very low linear shrinkage - minimum changes in linear dimensions during screed drying (≤ 0.6 mm/rm) limit the risk of cracking and loosening of weak substrates (of low cohesion).
Suitable for manual and machine application – can be easily and quickly applied both manually and with machines equipped with helical pumps, therefore high efficiency is reached.

Technical data

ATLAS SMS 30 is manufactured as a dry mix based on cement.

Bulk density (of dry mix)	approx. 1.20 kg/dm^3
Mass bulk density (after mixing)	approx. 2.00 kg/dm^3
Dry density (after setting)	approx. 1.80 kg/dm^3
Mixing ratio (water/dry mix)	0.20 ÷ 0.22 l/1 kg 5.00 ÷ 5.50 l/25 kg
Min./max. screed thickness	3 mm / 30 mm
Maximum aggregate size	0.5 mm
Linear changes	≤ 0.06%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life (between mass mixing until work end)	approx. 40 minutes*
Foot traffic	after min. 4 hours*
Full setting and drying	28 days*
Start of heating	after approx. 7 days*
Fixing the cladding	screed moisture not higher than 1.5% (in case of impermeable or wooden coverings follow the manufacturer's guidelines)

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

The product conforms to PN-EN 13813 standard. EC Declaration of Performance No. 163/CPR.

CE	PN-EN 13813:2003 (EN 13813:2002)
Cement – based screed CT-C30-F7	self-leveling, for indoor use
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CT
Compressive strength – class	C30
Flexural strength - class	F7
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 Radiation Hygiene Certificate.

Screed installation

Substrate preparation

The substrate should be stable, sound and air dry, due to the risk of mass outflow, should keep bath-like shape. General requirements for substrates:

- cement screeds – min. 28 days old,
- concrete – min. 3 months old.

Substrate irregularities (cracks and gaps) should be primed with ATLAS UNI-GRUNT emulsion or ATLAS GRUNTO-PLAST mass and leveled with ATLAS ZW 330 or ATLAS TEN-10 mortars. Dry, fixed substrate should be dusted and thoroughly primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS emulsion and left to dry.

Expansion joints

Separate screed from walls with ATLAS EXPANSION JOINT PROFILES. 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.

Mass preparation

Machine application – use mixing-and-pumping units with continuous flow of water. It is advisable to use pumps of efficiency 60 l/min. Pour the dry mix to the basket in the mixing-and-pumping unit, set the mix water level providing appropriate mass consistency. Proper consistency can be verified with the use of 0.5 liter or 1 liter container. The prepared mix, poured from a 0.5 liter container onto even, non-absorptive substrate (e.g. foil) should form a "patch" of approx. 35 ÷ 40 cm diameter (for 1.0 liter container - 50 ÷ 55 cm).

Manual application – pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix, best with a low-speed mixer with a drill for mortars, until homogenous. Remix after 5 minutes. The mass retains its properties for about 40 minutes. Proper consistency should be verified by pouring the mass from 1 liter container onto an even, non-absorptive substrate (e.g. foil). It should form a "patch" of approx. 50 ÷ 55 cm diameter.

Mass application

Before application, the future screed thickness is to be marked (on walls and in the application area), which can be done with, e.g. a level and portable height benchmarks. Pour the prepared mass evenly and continuously up to the desired height, avoid gaps. The application area should be arranged in the way allowing for mass application and de-aeration within approx. 40 minutes.

In case of manual application the excessive mass should be raked up towards oneself with a long metal float. Directly after each application area filling, the mass must be de-aerated with, e.g. a spike roller. For screeds of thickness above 20 mm it is advisable to use a stippler. It is recommended to perform de-aeration in two perpendicular directions just after the mass application.

Maintenance

The freshly applied screed should be protected against excessive drying, direct sunlight, low air humidity or draughts. In order to ensure favourable conditions for screed 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 depends on layer thickness and ambient thermal and humidity conditions. Foot traffic is possible after approx. 4 hours and full load after approx. 7 days.

Finishing works

The time of finishing works execution depends on the setting conditions, humidity, type and permeability of the top finish materials and can commence after approx. 24 hours in case of tiling. Parquet, panels and PVC flooring can be installed after approx. 7 days. Minimum screed thickness beneath parquet – 3 mm. Prime the surface with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS before fixing the cladding.

Consumption

The average consumption is 16.5 kg of mortar for 1 m^2 for each 10 mm of layer thickness.

Important additional information

- Inappropriate amount of mix water results in deterioration of strength parameters of screed. Moreover, the use of too much mix water (overlow) can cause local dark discolouration. It is a surface phenomenon and disappears after grinding. Monitor the mass consistency and quality of mixing during screed application.
- Tools must be cleaned with clean water directly after use.
- Contains cement. 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 in the Safety Data Sheet.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets), do not expose to direct sunshine, keep in dry, cool and well ventilated room. Protect against humidity – product gets irreversibly solid in contact with damp. Shelf life in conditions as specified is 9 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Foil 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: 2015-09-09

ATLAS POSTAR 100 (10-80 mm)
self-spreading cement floor

- very high compressive strength ≥ 50.0 N/mm²
- in warehouses, production halls, on driveways
- limited linear shrinkage
- self-spreading – easy in use
- for manual and machine application

Use

Levels surfaces within 10 - 80 mm thickness range - layer thickness depends on the expected structural arrangement (see table below). For leveling local irregularities as well as large scale flooring with slope.
Forms floor of high strength – recommended for loading ramps, driveways, underground car parks, terraces, balconies, warehouses, etc.
Can form top flooring layer as well as screed for other finishing materials.
Can be installed as screed with heating system – does not require elastifying admixtures, conducts heat well.
Can form screed for top flooring layers, e.g. parquet, epoxy floors and coats - characterised by high cohesion and resistance to setting forces, which occur within the joint with flooring layer, e.g. during expansion and contraction of wood resulting from the changes of humidity.

Types of finishing layers – ceramic and stone tiles, epoxy screeds and coats, PVC and carpet flooring, parquet, floor panels.
Types of possible arrangements:
bonded floor - thickness 10 - 60 mm – on good quality substrates, e.g. concrete, cement screed (with or without floor heating)
on separation layer - thickness 35 - 80 mm – on poor quality substrates, which do not provide appropriate bonding - dusty, cracked, oiled, dirty, very absorbable; separation layer can be made of, e.g. PE foil 0.2 mm thick.
floating - thickness 40 - 80 mm – applied on thermal or acoustic insulation layer made of: polystyrene boards of appropriate hardness, hardened mineral wool panels, etc.
heating – the layer above the heating layer should be **min. 35 mm thick.**

Properties

Perfect spreadability - enables execution of horizontal surfaces even in large rooms, with no use of battens and mass raking up with a darby.
Compressive strength: ≥ 50.0 N/mm².
Flexural strength: ≥ 7.0 N/mm².
Low linear shrinkage - minimum changes in linear dimensions during screed drying (approx. 0.6 mm/rm) limit the risk of cracking.
Suitable for machine application – easy and quick flooring even in large rooms.

Technical data

ATLAS POSTAR 100 manufactured as a dry mix of Portland cement, quartz fillers and modifiers.

Bulk density (of dry mix)	approx. 1.60 kg/dm³
Mass bulk density (after mixing)	approx. 2.25 kg/dm³
Dry density (after setting)	approx. 2.20 kg/dm³
Mixing ratio (water/dry mix)	0.13 ÷ 0.15 l/1 kg 3.25 ÷ 3.75 l/25 kg
Min./max. screed or floor thickness	10 mm / 80 mm
Maximum aggregate size	3.0 mm
Linear changes	≤ 0.06%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life	min. 30 minutes*
Foot traffic	after approx. 24 hours*
Fixing the cladding	after approx. 3 weeks*

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

ATLAS POSTAR 100 conforms to PN-EN 13813 standard. EC Declaration of Performance No. 084/CPR.

CE	PN-EN 13813:2003 (EN 13813:2002)
Cement based screed CT-C50-F7-A15	for indoor use
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CT
Compressive strength – class	C50 (≥ 50.0 N/mm²)
Flexural strength - class	F7 (≥ 7.0 N/mm²)
Böhme abrasion resistance - class	A15
Water permeability, vapour permeability, acoustic insulation, noise damping, heat resistance, chemical resistance	NPD
Release/content of hazardous substances	See: Safety Data Sheet

ATLAS POSTAR 100 has been given the ITB Technical Approval No. AT-15-6971/2012. Domestic Declaration of Conformity No. 084 of 30.04.2012. The product has been given the Radiation Hygiene Certificate.

Screed or floor installation

Substrate preparation

The substrate should be stable, sound and air dry, the method of its preparation depends on actual floor structural arrangement. General requirements for substrates:

- cement floors and screeds – min. 28 days old,
- concrete – min. 3 months old.

Bonded screed or floor. . The substrate must be free from layers which would impair bonding, particularly dust, lime, oils, grease, bitumen substances, paints, weak and loosening pieces of old substrates. Any substrate surface cracks should be widened, dusted and primed. Fill them with fast setting repair mortars ATLAS TEN-10 or ATLAS ZW 330. Prime once or twice with ATLAS UNI-GRUNT PLUS emulsion. Leave to dry (approx. 4 hours).

Screed or floor on separation layer. The separation layer, e.g. PE foil, must be spread tightly, without wrinkles and folded onto the walls (upon the expansion joint strips) at least to the height of the screed.

Floating floor or screed. The insulation boards must be placed tightly with offset edges upon even surface. Place the separation layer upon the boards and fold it onto the wall.

Screed with heating system. The heating installation must be checked and fixed, fill up the pipes of water heating system with water. The screed should be installed with one layer (when the heating installation is firmly fixed). Follow guidelines listed in the project documentation and recommendations of the heating system manufacturer.

Expansion joints

Separate floor or screed 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 indoors,
- 5 m^2 with sides length up to 3 m outdoors.

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 floor or screed layer.

Mortar preparation

Manual application. Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix until homogenous. Mix mechanically with a low speed mixer with a drill for gypsum, a flow mixer or a cement mixer. The mortar is ready to use directly after mixing and keeps properties within approx. 30 minutes.

Machine application. Pour the mortar into the basket of the mixing-and-pumping unit, set the mix water level providing appropriate consistency of the mass leaving the hose.

Mass application

The mass is poured mechanically with mixing-and-pumping units with continuous water flow and worm pump. It can also be poured manually. Before application, the future screed or floor thickness is to be marked within the application area, which can be done with, e.g. a level and portable height benchmarks. Pour the prepared mass evenly and continuously up to the desired height, avoid gaps. Just after filling an individual area, the mass has to be de-aerated with, e.g. de-aeration roller or a brush with long and hard hair. Move the brush shaking along and across the application area. The application area should be filled, leveled and de-aerated within approx. 30 minutes.

Screed drying and maintenance

During application and directly after, protect the installed layer against excessive drying, direct sunlight, low air humidity or draughts. In order to ensure favourable conditions for mortar setting, depending on needs, sprinkle the freshly applied surface with water or cover it with foil. The time of drying depends on the layer thickness and ambient thermal and humidity conditions. The use of screed or floor (foot traffic) can start after approx. 24 hours and full load after approx. 14 days.

Finishing works

The time of finishing works execution depends on the type of top finish and should start when screed parameters stabilize (after approx. 3-4 weeks), and in case of PVC flooring or parquet – after full drying. Prime the surface with ATLAS UNI-GRUNT PLUS before fixing the cladding.

Consumption

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

Important additional information

- Inappropriate amount of mix water results in deterioration of strength parameters of floor or screed. Monitor the mass consistency and quality of mixing during screed or floor application.
- Until the floor heating is fully turned on, temperature should be increased every 24 hours by maximum 2°C till the maximum operation temperature is achieved. The temperature should then be lowered at the same rate until the heating is turned off.
- Before the application of PCV flooring apply a smoothing layer made of ATLAS SMS 15 or ATLAS SMS 30.
- Tools must be cleaned with clean water directly after use.
- 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 in 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 building principles and OHS regulations.
At the time of publication of this product data sheet all previous ones become void.
Date of update: 2015-08-04

ATLAS POSTAR 80 (10-80 mm)

fast setting cement floor

- fast drying – further works just after 24 hours
- fast setting - foot traffic after 3 hours
- limited linear shrinkage
- high compressive strength ≥ 40.0 N/mm²
- excellent cohesion, under parquets and epoxy floors

Use

Forms screed or floor 10 - 80 mm thick - layer thickness depends on the expected structural arrangement (see table below).
Recommended for quick repairs – fast setting - rapidly reaches the operational parameters, therefore the technological breaks are shorter and application of subsequent layers quicker: foot traffic just after 3 hours; fixing the tiles - just after 24 hours.
Can form screed for top flooring layers, e.g. parquet, epoxy floors and coats - characterised by high cohesion and resistance to setting forces, which occur within the joint with flooring layer, e.g. during expansion and contraction of wood resulting from the changes of humidity.
Forms floor characterised by high abrasion resistance – recommended for residential housing, warehouses, industrial premises, on driveways, terraces, etc.
Can be installed as screed with heating system – does not require elastifying admixtures, conducts heat well.
Enables forming a slope and repairs of concrete surfaces, stairs, slabs, floors.

Types of finishing layers – ceramic and stone tiles, epoxy screeds and coats, PVC and carpet flooring, parquet, floor panels.
Types of possible arrangements:
bonded - thickness 10 - 60 mm – on good quality substrates, e.g. concrete, cement screed (with or without floor heating)
on separation layer - thickness 35 - 80 mm – on poor quality substrates, which do not provide appropriate bonding - dusty, cracked, oiled, dirty, very absorbable; separation layer can be made of, e.g. PE foil 0.2 mm thick.
floating - thickness 40 - 80 mm – applied on thermal or acoustic insulation layer made of: polystyrene boards of appropriate hardness, hardened mineral wool panels, etc
heating – the layer above the heating layer should be **min. 35 mm thick.**

Properties

Fast-drying - the residual moisture content below 2.6% for screed approx. 4 cm thick after 24 hours since application (in standard conditions).
Fast setting – rapid strength build up within the first day of setting.
Thick plasticity - mortar consistency makes it easy to spread, float and to form even surface.
Compressive strength: ≥ 40.0 N/mm² - recommended for any surfaces exposed to medium and high load.
Flexural strength: ≥ 7.0 N/mm².
Abrasion resistance: ≤9.5 cm³/50 cm² - acc. to Böhme (Technical Approval AT-15-8462/2010).
Low linear shrinkage - minimum changes in linear dimensions during screed drying (approx. 0.6 mm/rm) limit the risk of cracking.

Technical data

ATLAS POSTAR 80 manufactured as a dry mix of Portland cement, quartz fillers and modifiers.

Bulk density (of dry mix)	approx. 1.75 kg/dm³
Mass bulk density (after mixing)	approx. 2.40 kg/dm³
Dry density (after setting)	approx. 2.20 kg/dm³
Mixing ratio (water/dry mix)	approx. 0.08 l/1 kg approx. 2.00 l/25 kg
Min./max. screed or floor thickness	10 mm / 80 mm
Maximum aggregate size	4.0 mm
Linear changes	≤ 0.06%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +30°C
Pot life	min. 30 minutes*
Foot traffic	after approx. 3 hours*
Fixing the cladding	after approx. 24 hours*
Fixing the parquet, PCV or linoleum flooring	after approx. 24 hours*

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Changes in residual moisture content within time. The results of testing in standard conditions in temp. 20°C and humidity 55 - 60%. Perform humidity tests (with CM method) prior to each application of the flooring materials.

Time / layer thickness	1.5 cm	4 cm	7 cm
1 day	2.1 %	2.6 %	3.9 %
3 days	1.8 %	2.2 %	2.9 %
5 days	1.6 %	1.8 %	1.9 %

Technical requirements

ATLAS POSTAR 80 conforms to PN-EN 13813 standard. EC Declaration of Performance No. 099/CPR.

CE	PN-EN 13813:2003 (EN 13813:2002)
Cement based screed CT-C40-F7-A12	for indoor use
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CT
Compressive strength – class	C40 (≥ 40.0 N/mm^2)
Flexural strength - class	F7 (≥ 7.0 N/mm^2)
Abrasion resistance - class	A12
Water permeability, vapour permeability, acoustic insulation, noise damping, heat resistance, chemical resistance	NPD
Release/content of hazardous substances	See: Safety Data Sheet

ATLAS POSTAR 80 has been given the ITB Technical Approval No. AT-15- 8462/2010. Domestic Declaration of Conformity No. 099 of 01.10.2010. The product has been given the Radiation Hygiene Certificate.

Screed or floor installation

Substrate preparation

The substrate should be stable, sound and air dry, the method of its preparation depends on actual floor structural arrangement. General requirements for substrates:

- cement floors and screeds – min. 28 days old,
- concrete – min. 3 months old.

Bonded screed or floor. The substrate must be free from layers which would impair bonding, particularly dust, lime, oils, grease, bitumen substances, paints, weak and loosening pieces of old substrates. Any substrate surface cracks should be widened and dusted. Just before the application of the main mortar layer, the substrate should be moistened with water and contact coat applied.

The contact coat can be prepared with one of the following methods:

- with ATLAS POSTAR 80 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. When the contact coat dries, apply another one before the application of the main screed layer ("wet on wet" method).

Screed or floor on separation layer. The separation layer, e.g. PE foil, must be spread tightly, without wrinkles and folded onto the walls (upon the expansion joint strips) at least to the height of the screed.

Floating floor or screed. The insulation boards must be placed tightly with offset edges upon even surface. Place the separation layer upon the boards and fold it onto the wall.

Screed with heating system. The heating installation must be checked and fixed, fill up the pipes of water heating system with water. The screed should be installed with one layer (when the heating installation is firmly fixed). Follow guidelines listed in the project documentation and recommendations of the heating system manufacturer.

Expansion joints

Separate floor or screed 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 indoors,
- 5 m^2 with sides length up to 3 m outdoors.

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 floor or screed layer.

Mortar preparation

Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix until homogenous. Mix mechanically with a low speed mixer with a drill for mortars, a flow mixer or a cement mixer. The mortar is ready to use directly after mixing and keeps properties within approx. 30 minutes.

Mass application

Carry the works out according to flooring technology. Use wooden or metal battens to keep screed surface even. Place the battens so the screed or floor layer thickness corresponds to the expected one and is in no place lower than the minimum thickness assumed for a chosen structural arrangement (bonded, on separation layer, floating). In order to compact the mass and spread it more precisely, one can vibrate it with a darby or compact with a float. Collect the excessive mortar along the battens with zigzag moves. The application area should be filled and leveled within approx. 30 minutes. The surface can be floated and smoothed after approx. 3 hours.

Screed drying and maintenance

During application and directly after, protect the installed screed or floor against excessive drying, direct sunlight, low air humidity or draughts. 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 depends on the layer thickness and ambient thermal and humidity conditions. The use of screed or floor (foot traffic) can start after approx. 3 hours and full load after approx. 7 days.

Finishing works

The time of finishing works execution depends on the setting conditions, humidity, type and permeability of the top finish materials and can commence after approx. 24 hours in case of tiling. PVC flooring can be installed when the screed dries fully. Parquet can be installed after approx. 7 days.

If in doubt on the actual residual moisture content, carry out appropriate measuring. The residual moisture content should not exceed:

3% - for tiling,

2% - for the application of self-levelling masses or vapour impermeable flooring, e.g. PVC, wooden flooring, epoxy floors.

Prime the surface with ATLAS UNI-GRUNT PLUS before fixing the cladding.

Consumption

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

Important additional information

- Inappropriate amount of mix water results in deterioration of strength parameters of of floor or screed. Monitor the mass consistency and quality of mixing during screed or floor application.
- Higher air humidity or low temperature extend the setting time of screed.
- Until the floor heating is fully turned on, temperature should be increased every 24 hours by maximum 2°C till the maximum operation temperature is achieved. The temperature should then be lowered at the same rate until the heating is turned off.
- Before the application of PCV flooring apply a smoothing layer made of ATLAS SMS 15 or ATLAS SMS 30.
- Tools must be cleaned with clean water directly after use.
- 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 in 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

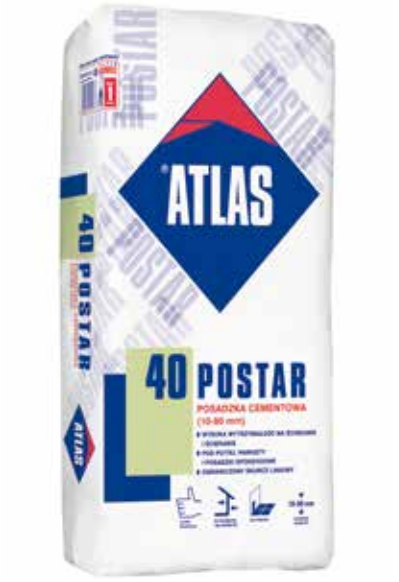
Paper bags: 25 kg

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 building principles and OHS regulations.

At the time of publication of this product data sheet all previous ones become void.

Date of update: 2015-04-24



ATLAS POSTAR 40 (10-80 mm)
cement floor

- high compressive strength ≥ 30.0 N/mm²
- in warehouses, production halls, on driveways
- under tiles, parquet, epoxy floor
- for places exposed to permanent damp
- bonded, on separation layer or floating

Use

Forms screed or floor 10 - 80 mm thick - layer thickness depends on the expected structural arrangement (see table below).
Can form screed for top flooring layers, e.g. parquet, epoxy floors and coats - characterised by high cohesion and resistance to setting forces, which occur within the joint with flooring layer, e.g. during expansion and contraction of wood resulting from the changes of humidity.
Recommended for installation of screeds and floors in residential housing, warehouses, industrial premises, on driveways, terraces, etc.
Enables forming a slope.
Can be installed as screed with heating system – does not require elastifying admixtures, conducts heat well.

Types of finishing layers – ceramic and stone tiles, epoxy screeds and coats, PVC and carpet flooring, parquet, floor panels.
Types of possible arrangements:
bonded - thickness 10 - 60 mm – on good quality substrates, e.g. concrete, cement screed (with or without floor heating)
on separation layer - thickness 35 - 80 mm – on poor quality substrates, which do not provide appropriate bonding - dusty, cracked, oiled, dirty, very absorbable; separation layer can be made of, e.g. PE foil 0.2 mm thick
floating - thickness 40 - 80 mm – applied on thermal or acoustic insulation layer made of: polystyrene boards of appropriate hardness, hardened mineral wool panels, etc.
heating – the layer above the heating layer should be **min. 35 mm thick.**

Properties

Thick plasticity - mortar consistency makes it easy to spread, float and to form even surface.
Compressive strength: ≥ 30.0 N/mm².
Flexural strength: ≥ 6.0 N/mm².
Low linear shrinkage - minimum changes in linear dimensions during screed drying (approx. 0.8 mm/rm) limit the risk of cracking.
Suitable for manual application - to be spread on battens.
The mix can be prepared in flow mixers.
The mortar can be supplemented with, so-called anti-frost additives allowing to carry out works in low temperature, i.e. below +5°C – the new range of temperature of mortar application, the way of preparation (especially the adjustment of mix water), principles of carrying out works and mortar setting conditions must be set according to the guidelines of the additive manufacturer. The amount of the anti-frost agent depends on the content of cement in the mortar – the ratio cement/fillers in ATLAS POSTAR 40 is 1:3.
Note. The manufacturer of the mortar does not bear responsibility for the result and the quality of the anti-frost agents used.

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Technical data

ATLAS POSTAR 40 manufactured as a dry mix of Portland cement, quartz fillers and improvers.

Bulk density (of dry mix)	approx. 1.75 kg/dm³
Mass bulk density (after mixing)	approx. 2.25 kg/dm³
Dry density (after setting)	approx. 2.15 kg/dm³
Mixing ratio (water/dry mix)	0.08 ÷ 0.15 l/1 kg 2.00 ÷ 3.75 l/25 kg
Min./max. screed or floor thickness	10 mm / 80 mm
Contact coat ratio for bonded floor of thickness below 2.0-2.5 cm	1 kg of dry mix + 0.12 l of water + 0.06 l of ATLAS ELASTIC EMULSION
Maximum aggregate size	3.0 mm
Linear changes	≤ 0.08%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life	min. 1 hour*
Foot traffic	after approx. 24 hours*
Fixing the cladding	after approx. 3-4 weeks*

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

ATLAS POSTAR 40 conforms to PN-EN 13813 standard. EC Declaration of Performance No. 039/CPR.

CE	PN-EN 13813:2003 (EN 13813:2002)
Cement based screed CT-C30-F6-A22	for indoor use
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CT
Compressive strength – class	C30 (≥ 30 N/mm²)
Flexural strength - class	F6 (≥ 6 N/mm²)
Abrasion resistance - class	A22
Water permeability, vapour permeability, acoustic insulation, noise damping, heat resistance, chemical resistance	NPD
Release/content of hazardous substances	See: Safety Data Sheet

ATLAS POSTAR 40 has been given the ITB Technical Approval No. AT-15- 6972/2012. Domestic Declaration of Conformity No. 039 of 30.04.2012. The product has been given the Radiation Hygiene Certificate.

Screed or floor installation

Substrate preparation
The substrate should be stable, sound and air dry, the method of its preparation depends on actual floor structural arrangement. General requirements for substrates:
- cement floors and screeds – min. 28 days old,
- concrete – min. 3 months old.

Bonded screed or floor. The substrate must be free from layers which would impair bonding, particularly dust, lime, oils, grease, bitumen substances, paints, weak and loosening pieces of old substrates. Any substrate surface cracks should be widened and dusted. Just before the application of the main mortar layer, the substrate should be moistened with water and contact coat applied.
The contact coat can be prepared with one of the following methods:
- with ATLAS POSTAR 40 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. When the contact coat dries, apply another one before the application of the main screed layer.
Screed or floor on separation layer. The separation layer, e.g. PE foil, must be spread tightly, without wrinkles and folded onto the walls (upon the expansion joint strips) at least to the height of the screed.
Floating floor or screed. The insulation boards must be placed tightly with offset edges upon even surface. Place the separation layer upon the boards and fold it onto the wall.
Screed with heating system. The heating installation must be checked and fixed, fill up the pipes of water heating system with water. The screed should be installed with one layer (when the heating installation is firmly fixed). Follow guidelines listed in the project documentation and recommendations of the heating system manufacturer.

Expansion joints
Separate floor or screed 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 indoors,
- 5 m^2 with sides length up to 3 m outdoors.

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 floor or screed layer.

Mortar preparation
Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix until homogenous. Mix mechanically with a low speed mixer with a drill for mortars, a flow mixer or a cement mixer. The mortar is ready to use directly after mixing and keeps properties within approx. 1 hour.

Mass application
Carry the works out according to flooring technology. Use wooden or metal battens to keep floor or screed surface even. Place the battens so the floor or screed layer thickness corresponds to the expected one and is in no place lower than the minimum thickness assumed for a chosen structural arrangement (bonded, on separation layer, floating). In order to compact the mass and spread it more precisely, one can vibrate it with a darby or compact with a float. Collect the excessive mortar along the battens with zigzag moves. The application area should be filled and leveled within approx. 1 hour. The surface can be floated and smoothed after approx. 3 hours.

Screed drying and maintenance
During application and directly after, protect the installed layer against excessive drying, direct sunlight, low air humidity or draughts. 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. Reduce heating in a room where screed or floor has been installed. The time of drying depends on the layer thickness and ambient thermal and humidity conditions. The use of screed or floor (foot traffic) can start after approx. 24 hours and full load after approx. 14 days.

Finishing works
The time of finishing works execution depends on the type of top finish and should start when screed parameters stabilize (after approx. 3-4 weeks), and in case of PVC flooring or parquet – after full drying. Prime the surface with ATLAS UNI-GRUNT before fixing the cladding.

Consumption

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

Important additional information

- Inappropriate amount of mix water results in deterioration of strength parameters of floor or screed.
- Until the floor heating is fully turned on, temperature should be increased every 24 hours by maximum 2°C till the maximum operation temperature is achieved. The temperature should then be lowered at the same rate until the heating is turned off.
- Before the application of PCV flooring apply a smoothing layer made of ATLAS SMS 15 or ATLAS SMS 30.
- Tools must be cleaned with clean water directly after use.
- 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 in 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 building principles and OHS regulations.
At the time of publication of this product data sheet all previous ones become void.
Date of update: 2015-04-24

ATLAS POSTAR 20 (10-80 mm)
fast drying cement screed

- fast drying – further works just after 5 days
- foot traffic after 24 hours
- limited linear shrinkage
- high compressive strength ≥ 20.0 N/mm²
- for places exposed to permanent damp

Use

Forms screed 10 - 80 mm thick - layer thickness depends on the expected structural arrangement (see table below).
Recommended for installation of screeds in residential housing, public access buildings, etc.
Can be installed as screed with heating system – does not require elastifying admixtures, conducts heat well.
Enables forming a slope and repairs of concrete surfaces, stairs, slabs, floors.

Types of finishing layers – ceramic and stone tiles, PVC and carpet flooring, floor panels.
Types of possible arrangements:
bonded - thickness 10 - 80 mm – on good quality substrates, e.g. concrete, cement screed (with or without floor heating)
on separation layer - thickness 35 - 80 mm – on poor quality substrates, which do not provide appropriate bonding - dusty, cracked, oiled, dirty, very absorbable; separation layer can be made of, e.g. PE foil 0.2 mm thick
floating - thickness 40 - 80 mm – applied on thermal or acoustic insulation layer made of: polystyrene boards of appropriate hardness, hardened mineral wool panels, etc.
heating – – the layer above the heating layer should be **min. 35 mm thick.**

Properties

Fast-drying - the residual moisture content below 3% for screed approx. 4 cm thick after 5 - 6 days since application (in standard conditions).
Thick plasticity - mortar consistency makes it easy to spread, float and to form even surface (horizontal or sloped).
Compressive strength: ≥ 20.0 N/mm².
Flexural strength: ≥ 4.0 N/mm².
Low linear shrinkage - minimum changes in linear dimensions during screed drying (approx. 0.6 mm/rm) limit the risk of cracking.

Technical data

ATLAS POSTAR 20 manufactured as a dry mix of Portland cement, quartz fillers and additives.

Bulk density (of dry mix)	approx. 1.60 kg/dm³
Mass bulk density (after mixing)	approx. 2.20 kg/dm³
Dry density (after setting)	approx. 1.95 kg/dm³
Mixing ratio (water/dry mix)	approx. 0.11 l/1 kg approx. 2.75 l/25 kg
Min./max. screed thickness	10 mm / 80 mm
Maximum aggregate size	3.0 mm
Linear changes	≤ 0.06%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +30°C
Pot life	min. 30 minutes*
Foot traffic	after approx. 24 hours*
Fixing the cladding	after approx. 5-6 days*

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Changes in residual moisture content within time. The results of testing in standard conditions in temp. 20°C and humidity 55 - 60%. Perform humidity tests (with CM method) prior to each application of the flooring materials.

Time / layer thickness	1.5 cm	4 cm	7 cm
2 days	2.0 %	2.4 %	3.6 %
7 days	1.5 %	2.1 %	2.7 %
14 days	1.4 %	1.6 %	1.8 %

Technical requirements

ATLAS POSTAR 20 conforms to PN-EN 13813 standard. EC Declaration of Performance No. 107/CPR.

CE	PN-EN 13813:2003 (EN 13813:2002)
Cement based screed CT-C20-F4	for indoor use
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CT
Compressive strength – class	C20 (≥ 20.0 N/mm^2)
Flexural strength - class	F4 (≥ 4.0 N/mm^2)
Water permeability, vapour permeability, acoustic insulation, noise damping, heat resistance, chemical resistance	NPD
Release/content of hazardous substances	See: Safety Data Sheet

ATLAS POSTAR 20 has been given the ITB Technical Approval No. AT-15- 8432/2010. Domestic Declaration of Conformity No. 107 of 11.08.2010. The product has been given the Radiation Hygiene Certificate.

Screed installation

Substrate preparation

The substrate should be stable, sound and air dry, the method of its preparation depends on actual floor structural arrangement. General requirements for substrates:

- cement floors and screeds – min. 28 days old,
- concrete – min. 3 months old

Bonded screed. The substrate must be free from layers which would impair bonding, particularly dust, lime, oils, grease, bitumen substances, paints, weak and loosening pieces of old substrates. Any substrate surface cracks should be widened and dusted. Just before the application of the main mortar layer, the substrate should be moistened with water and contact coat applied.

The contact coat can be prepared with one of the following methods:

- with ATLAS POSTAR 20 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. When the contact coat dries, apply another one before the application of the main screed layer.

Screed on separation layer. The separation layer, e.g. PE foil, must be spread tightly, without wrinkles and folded onto the walls (upon the expansion joint strips) at least to the height of the screed.

Floating screed. The insulation boards must be placed tightly with offset edges upon even surface. Place the separation layer upon the boards and fold it onto the wall.

Screed with heating system. The heating installation must be checked and fixed, fill up the pipes of water heating system with water. The screed should be installed with one layer (when the heating installation is firmly fixed). Follow guidelines listed in the project documentation and recommendations of the heating system manufacturer.

Expansion joints

Separate screed 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 indoors,
- 5 m^2 with sides length up to 3 m outdoors.

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.

Mortar preparation

Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix until homogenous. Mix mechanically with a low speed mixer with a drill for mortars, a flow mixer or a cement mixer. The mortar is ready to use directly after mixing and keeps properties within approx. 30 minutes.

Mass application

Carry the works out according to flooring technology. Use wooden or metal battens to keep screed surface even. Place the battens so the screed layer thickness corresponds to the expected one and is in no place lower than the minimum thickness assumed for a chosen structural arrangement (bonded, on separation layer, floating). In order to compact the mass and spread it more precisely, one can vibrate it with a darby or compact with a float. Collect the excessive mortar along the battens with zigzag moves. The application area should be filled and leveled within approx. 30 minutes. The surface can be floated and smoothed after approx. 3 hours.

Screed drying and maintenance

During application and directly after, protect the installed layer against excessive drying, direct sunlight, low air humidity or draughts. 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. 24 hours and full load after approx. 14 days.

Finishing works

The time of finishing works execution depends on the setting conditions, humidity, type and permeability of the top finish materials and can commence after approx. 5 - 6 days in case of tiling. PVC flooring can be installed when the screed dries fully.

If in doubt on the actual residual moisture content, carry out appropriate measuring. The residual moisture content should not exceed:

3% - for tiling,

2% - for the application of self-levelling masses or vapour impermeable flooring, e.g. PVC.

Prime the surface with ATLAS UNI-GRUNT PLUS before fixing the cladding.

Consumption

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

Important additional information

- Inappropriate amount of mix water results in deterioration of strength parameters of screed. Monitor the mass consistency and quality of mixing during screed application.
- Higher air humidity or low temperature extend the setting time of screed.
- Until the floor heating is fully turned on, temperature should be increased every 24 hours by maximum 2°C till the maximum operation temperature is achieved. The temperature should then be lowered at the same rate until the heating is turned off.
- Before the application of PCV flooring apply a smoothing layer made of ATLAS SMS 15 or ATLAS SMS 30.
- Tools must be cleaned with clean water directly after use.
- 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 in 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 building principles and OHS regulations.

At the time of publication of this product data sheet all previous ones become void.

Date of update: 2015-05-08

ATLAS POSTAR 10 (10-100 mm)

traditional cement floor

- high compressive strength ≥ 25.0 N/mm²
- in warehouses, production halls
- under tiles, parquet, panels
- for places exposed to permanent damp
- bonded, on separation layer or floating

Use

Forms screed or floor 10 - 100 mm thick - layer thickness depends on the expected structural arrangement (see table below).
Can form screed for top flooring layers, e.g. parquet - characterised by high cohesion and resistance to setting forces, which occur within the joint with flooring layer, e.g. during expansion and contraction of wood resulting from the changes of humidity.
Recommended for installation of screeds and floors in residential housing, warehouses, industrial premises, etc.
Enables forming a slope.
Can be installed as screed with heating system - conducts heat well.

Types of finishing layers – ceramic and stone tiles, epoxy screeds, PVC and carpet flooring, parquet, floor panels.
Types of possible arrangements:
bonded - thickness 10 - 100 mm – on good quality substrates, e.g. concrete, cement screed (with or without floor heating)
on separation layer - thickness 35 - 100 mm – on poor quality substrates, which do not provide appropriate bonding - dusty, cracked, oiled, dirty, very absorbable; separation layer can be made of, e.g. PE foil 0.2 mm thick
floating - thickness 40 - 100 mm – applied on thermal or acoustic insulation layer made of: polystyrene boards of appropriate hardness, hardened mineral wool panels, etc.
heating – the layer above the heating layer should be **min. 35 mm thick.**

Properties

Thick plasticity - mortar consistency makes it easy to spread, float and to form even surface.
Compressive strength: ≥ 25.0 N/mm².
Flexural strength: ≥ 5.0 N/mm².
Low linear shrinkage - minimum changes in linear dimensions during screed drying (approx. 0.6 mm/rm) limit the risk of cracking.
Suitable for manual application - to be spread on battens.
The mix can be prepared in flow mixers.

Technical data

ATLAS POSTAR 10 manufactured as a dry mix of Portland cement, quartz fillers and improvers.

Bulk density (of dry mix)	approx. 1.60 kg/dm³
Mass bulk density (after mixing)	approx. 2.00 kg/dm³
Dry density (after setting)	approx. 2.20 kg/dm³
Mixing ratio (water/dry mix)	0.09 ÷ 0.12 l/1 kg 2.25 ÷ 3.00 l/25 kg
Min./max. screed or floor thickness	10 mm / 100 mm
Maximum aggregate size	3.0 mm
Linear changes	≤ 0.06%
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Pot life	min. 1 hour*
Foot traffic	after approx. 24 hours*
Fixing the cladding	after approx. 2 weeks*

*The time shown in the table is recommended for the application in the temperature 20°C and humidity 55-60% (approx.).

Technical requirements

ATLAS POSTAR 10 conforms to PN-EN 13813 standard. EC Declaration of Performance No. 173/CPR.

CE	PN-EN 13813:2003 (EN 13813:2002)
Cement based screed CT-C25-F5-A15	for indoor use
Reaction to fire – class	$A1_{fl}$
Corrosive substance release	CT
Compressive strength – class	C25 (≥ 25 N/mm²)
Flexural strength - class	F5 (≥ 5 N/mm²)
Böhme abrasion resistance - class	A15
Water permeability, vapour permeability, acoustic insulation, noise damping, heat resistance, chemical resistance	NPD
Release/content of hazardous substances	See: Safety Data Sheet

ATLAS POSTAR 10 has been given the ITB Technical Approval No. AT-15- 9621/2016. Domestic Declaration of Conformity No. 173 of 27.01.2016. The product has been given the Radiation Hygiene Certificate.

Screed or floor installation

Substrate preparation

The substrate should be stable, sound and air dry, the method of its preparation depends on actual floor structural arrangement. General requirements for substrates:

- cement floors and screeds – min. 28 days old,
- concrete – min. 3 months old.

Bonded screed or floor. The substrate must be free from layers which would impair bonding, particularly dust, lime, oils, grease, bitumen substances, paints, weak and loosening pieces of old substrates. Any substrate surface cracks should be widened and dusted. Just before the application of the main mortar layer, the substrate should be moistened with water and contact coat applied.

The contact coat can be prepared with one of the following methods:

- with ATLAS POSTAR 10 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. When the contact coat dries, apply another one before the application of the main screed layer.

Screed or floor on separation layer. The separation layer, e.g. PE foil, must be spread tightly, without wrinkles and folded onto the walls (upon the expansion joint strips) at least to the height of the screed.

Floating floor or screed. The insulation boards must be placed tightly with offset edges upon even surface. Place the separation layer upon the boards and fold it onto the wall.

Screed with heating system. The heating installation must be checked and fixed, fill up the pipes of water heating system with water. The screed should be installed with one layer (when the heating installation is firmly fixed). Follow guidelines listed in the project documentation and recommendations of the heating system manufacturer.

Expansion joints

Separate floor or screed 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 indoors,
- 5 m^2 with sides length up to 3 m outdoors.

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 floor or screed layer.

Mortar preparation

Pour the mortar from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix until homogenous. Mix mechanically with a low speed mixer with a drill for mortars, a flow mixer or a cement mixer. The mortar is ready to use directly after mixing and keeps properties within approx. 1 hour.

Mass application

Carry the works out according to flooring technology. Use wooden or metal battens to keep floor or screed surface even. Place the battens so the floor or screed layer thickness corresponds to the expected one and is in no place lower than the minimum thickness assumed for a chosen structural arrangement (bonded, on separation layer, floating). In order to compact the mass and spread it more precisely, one can vibrate it with a darby or compact with a float. Collect the excessive mortar along the battens with zigzag moves. The application area should be filled and leveled within approx. 1 hour. The surface can be floated and smoothed after approx. 3 hours (if needed).

Screed drying and maintenance

During application and directly after, protect the installed layer against excessive drying, direct sunlight, low air humidity or draughts. 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. Reduce heating in a room where screed or floor has been installed. The time of drying depends on the layer thickness and ambient thermal and humidity conditions. The use of screed or floor (foot traffic) can start after approx. 24 hours and full load after approx. 14 days.

Finishing works

The time of finishing works execution depends on the type of top finish and should start when screed parameters stabilize (after approx. 2 weeks), and in case of PVC flooring or parquet – after full drying. Prime the surface with ATLAS UNI-GRUNT before fixing the cladding.

Consumption

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

Important additional information

- Inappropriate amount of mix water results in deterioration of strength parameters of floor or screed.
- Until the floor heating is fully turned on, temperature should be increased every 24 hours by maximum 2°C till the maximum operation temperature is achieved. The temperature should then be lowered at the same rate until the heating is turned off.
- Before the application of PCV flooring apply a smoothing layer made of ATLAS SMS 15 or ATLAS SMS 30.
- Tools must be cleaned with clean water directly after use.
- 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 in 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 building principles and OHS regulations.
At the time of publication of this product data sheet all previous ones become void.
Date of update: 2016-04-01

ATLAS FLOOR EXPANSION JOINT PROFILES

- for cement and anhydrite-gypsum based screeds
- form perimeter and intermediate expansion joints
- with noise damping properties

FOR FLOORS INDOORS

Use

Installation of perimeter and intermediate expansion joints in floating floors.

Properties

Non-absorbent.
Easy in use – with self-adhesive element.
Allow for free screed action – reduce the risk of screed cracking resulting from deformation, e.g. thermal one.
Soundproofing - at walls and other vertical elements, e.g. columns.
Available in two types – with or without foil apron (with a foil apron one can attach the profile to the plastic foil separating the floor layers).

Technical data

ATLAS EXPANSION JOINT PROFILES are made of CONTACTFOAM polyethylene foam.

Cross-section thickness	8 mm
Profile height	70 mm (without an apron) 120 mm (with a foil apron)

Profiles installation

Screed or floor should be separated from walls and other elements situated within the application area with ATLAS EXPANSION JOINT PROFILES installed in accordance to the flooring technology. The profiles should be fixed in a way, so they reach from the floor slab level up to the top finish surface layer. ATLAS EXPANSION JOINT PROFILES are attached to wall with the self-adhesive profile element.

At walls and in other places where ATLAS EXPANSION JOINT PROFILES without an apron are installed, the plastic foil should be turned up slightly above the level of the screed to be poured. If ATLAS EXPANSION JOINT PROFILES with an apron are used, the foil should be placed upon the apron.

When installing ATLAS EXPANSION JOINT PROFILES with apron on floors with thermal or acoustic insulation, the foil apron should be turned upon the insulation boards.

Packaging

Roll: 50 rm

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 building principles and OHS regulations.
At the time of publication of this product data sheet all previous ones become void.
Date of update: 2013-05-24

TABLE 5.2

PRODUCT					
	ATLAS POSTAR 10	ATLAS POSTAR 20	ATLAS POSTAR 40	ATLAS POSTAR 80	ATLAS POSTAR 100
	Traditional cement floor	Fast drying cement screed	Cement floor	Fast-setting cement floor	Self-spreading cement floor
Reference document	PN-EN 13813:2003				
	AT-15-9621/2016	AT-15-8432/2010 + Annex 1	AT-15-6972/2012	AT-15-8462/2010 + Annex 1	AT-15-6971/2012
Classification	CT-C25-F5-A15	CT-C20-F4	CT-C30-F6-A22	CT-C40-F7-A12	CT-C50-F7-A15
TECHNICAL DATA					
Self-spreading					✓
Thickness [mm]	10-100	10-80	10-80	10-80	10-80
Mixing ratio water/dry mix [l/ 25 kg]	2.25-3.00	2.75	2.00-3.75	2.00	3.25-3.75
Consumption for 1 cm thickness [kg/m^2]	20	20	20	20	20
Compressive strength [N/mm^2]	≥25	≥20	≥30	≥40	≥50
Flexural strength [N/mm^2]	≥5	≥4	≥6	≥7	≥7
Böhme abrasion resistance - class	A15		A22	A12	A15
Linear contraction [%]	<0.06	<0.06	<0.08	<0.06	<0.06
Floor access/ foot traffic [h]	24	24	24	3	24
Fixing the tiles [days]	14	1	21-28	1	21-28
Parquet installation [days]	21-28		21-28	7	21
Installation of panels or carpets [days]	21-28	14	21-28	7	21-28
Application of epoxy coat [days]	21-28		21-28	7	21-28
Start of heating (for screeds with heating) [days]	7	7	7	7	7
Manual application	✓	✓	✓	✓	✓
Machine application					✓
SCREED TYPE					
Bonded	✓	✓	✓	✓	✓
On separation layer	✓	✓	✓	✓	✓
Floating	✓	✓	✓	✓	✓
With heating system	✓	✓	✓	✓	✓
USE IN FLOOR STRUCTURE					
Top floor	✓		✓	✓	✓
PLACE OF APPLICATION					
Indoors - dry	✓	✓	✓	✓	✓
Indoors - wet	✓	✓	✓	✓	✓
Outdoors	✓	✓	✓	✓	✓