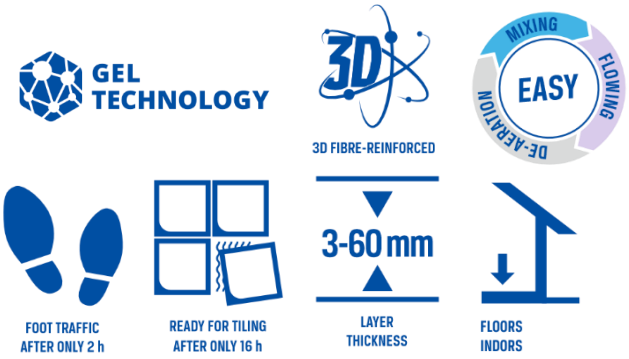
ATLAS SMS 60 ULTRA

cement-based self-levelling floor screed with the gel technology

- for levelling old substrates in a layer of 3 - 60 mm
- for making self-levelling floating screeds with a thickness of 30 – 60 mm
- it can be used for making of heating screeds from 25 mm above the heating system (below the standard thickness),
- as substrate for tiles, laminate flooring, fitted carpets, parquet floors and floorboards
- can be used as a final layer - floor
- foot traffic after only 2 hours
- ready for tiling after only 16 hours
- very smooth surface



GEL TECHNOLOGY – UNIVERSAL Controlled flowability

The gel technology improves processing properties to enable the adjustment of the product's consistency and flowability to specific application areas. The technology also enables shaping strength parameters and applying them to specific service loads.
In particular:
- it optimizes the cement hydration process and the strength increase rate to limit shrinkage and minimize the risk of cracks,
- large applicability range of mixing water - to adjust the flowability of the screed to the needs and conditions and shape the strength parameters:

- C35F9 A9 – for mixing water 16-17% (4.00- 4.25 l/25 kg)
- C25F7 A12 – for mixing water 18-21% (4.50- 5.25 l/25 kg)

- increased work safety - by accumulating water, it protects the mix in the first phase of binding against too rapid loss of moisture due to sorption by the substrate or evaporation.

EASY MIXING – FLOWING – DE-AERATION

Easy mixing – the wetting additives used shorten the mix preparation time by up to 2-3 times.

Excellent flowability supports the self-levelling of the mix - the addition of plasticizers improves the flow of the mix to enable its quick spreading. ATLAS SMS 60 ULTRA features the ability to easily self-level to minimize the amount of work.

Much faster de-aeration of the screed after pouring (after just 1-2 roller passes) - the formula reduces the amount of air enclosed in the mix to support the self-de-aeration process

SPEED

Acceleration of the initial setting begins after approx. 50 minutes from pouring the screed. Light foot traffic is possible already after 2 hours from pouring the screed, in the full range of permissible thicknesses, and the operational load strength is achieved after 2.5 hours.
Work can be continued after only 16 hours from pouring the screed.

Properties

ATLAS SMS 60 is a gel, fast-setting, self-levelling floor screed with versatile applications, perfect for various floor construction variants and underfloor heating systems. It can also be used as a stand-alone floor.

It is produced as a cement-based dry mix.

It has an excellent flowability – it ensures an even and smooth surface even in large rooms, without screed rails or screeding with a levelling board.

Fast-setting – thanks to fast increase in strength, foot traffic is possible already after 2 hours from pouring the screed.

It is suitable for manual and machine application – it can be easily and quickly applied both manually and with a screw pump machine for a higher yield.

It has a very low linear shrinkage – minimal linear changes of the screed during setting (≤ 0.6 mm/m) reduce the possibility of cracking and peeling off weak substrates (with low bonding strength).

Intended use

Evening out of substrates within a range of 3-60 mm – both when the substrate has only local irregularities as well as when levelling of the entire substrate in the room is required.

Recommended as a screed for fitted carpets in offices, kindergartens, schools, apartments, etc. - it ensures the screed smoothness required for PVC panels, PVC roll carpets and resin varnish layers.

Raising of the floor level in the whole room - e.g. in order to level two adjacent rooms.

It can be used in residential rooms, hallways, halls, living rooms, offices, public buildings, service facilities, etc.

It can be applied in rooms with increased humidity including bathrooms.

Recommended for levelling old heating, cement and anhydrite screeds - when an uneven screed makes it impossible to install the final cladding and an additional, thin layer of screed must be applied.

Types of finishing coats – tiles, PVC and carpet coverings, wood-based panels, laminated floorboards, PVC panels, epoxy and polyurethane resin varnished floors, parquet, epoxy floors.

Types of ATLAS SMS 60 ULTRA screeds:
- **bonded screed – thickness 3-60 mm –** on a screed made of concrete or cement mortar minimum C16 with or without hot-water floor heating,
- **self-supporting screed on a separating layer – thickness 25-60 mm** – when the substrate is of poor quality and does not ensure proper adhesion, i.e. dusty, scratched (stable scratches), oily, dirty, highly absorbent, the separating layer may be e.g. PE foil ≥ 0.2 mm thick,
- **floating screed - thickness 30-60 mm** - laid on thermal or sound insulations made of: polystyrene foam boards with adequate hardness of minimum TR 100 class, hard floor boards made of mineral wool, etc.
- **screed with hot-water floor heating - thickness over the heating system should be at least 25 mm***; if the screed is laid on underfloor heating, it does not require additional reinforcement. This also applies to screeds on EPS/XPS prefabricated boards or mats on which the hot-water floor heating system was installed.

Note: electric heating mats should be laid in a layer of adhesive mortar when installing ceramic or stone tile claddings.

*For the screed on prefabricated boards and 16-17% (C35F9 A9) mixing water, you can apply a screed with a smaller thickness above the pipes:
- 10 mm of mortar for the final layer of ceramic tiles,
- 15 mm of mortar for the final layer of PVC or carpet coverings.

For higher mixing water, apply a 25 mm thick screed above the hot-water floor heating pipes.

Technical specifications

Bulk density (of dry mix)	approx. 1.4 kg/dm³
Mixing ratios of water / dry mix	0.16 – 0.21 l / 1 kg 4.0 – 5.25 l / 25 kg
Min. / max. screed thickness	3 mm / 60 mm
Aggregate maximum diameter	1.0 mm
Linear expansion/shrinkage:	< 0.06%
Temperature during the preparation as well as substrate and ambient temperature during the works	from +5 °C to +25 °C
Pot life (from mixing to completion of the works)	approx. 40 minutes
Foot traffic	after minimum 2 hours
Full setting time	28 days

The times given in the table apply to normal application conditions: temperature approx. 20 °C and humidity 55-60%.

Technical requirements

The product complies with PN-EN 13813:2012.

ATLAS SMS 60 ULTRA (2025) Declaration of performance no. 297/CPR. EN 13813:2002	
Intended use: EN 13813 CT-C25-F7 Cement-based floor screed for indoor application	
Reaction to fire (in case of exposure)	$A1_{fl}$
Release of corrosive substances	CT
Compressive strength - class	C25
Bending strength - class	F7
Abrasion resistance	A12

Laying the screed

Substrate preparation

The substrate should be stable, load-bearing and air-dry (structural moisture ≤ 4%), effectively isolated against moisture.
Requirements for substrates:
- cement substrates - more than 28 days old,
- ATLAS SAM anhydrite substrates – with humidity up to 1 % CM and an ATLAS EPO-S priming coat with quartz sand,
- concrete – more than 3 months old.

Level the substrate irregularities (cavities and defects) with ATLAS ZW 330 mortar. Remove dust from the dried and repaired substrate and prime it thoroughly using e.g.:
- ATLAS UNI-GRUNT,
- ATLAS UNI-GRUNT ULTRA.

When pouring thin layers (3-5 mm) of screed on very absorbent substrates (e.g. machine laid screeds), it is recommended to prime the substrate twice using the "wet on wet" method.
Terrazzo-type substrates must be degreased and the layers of pastes and impregnating agents must be removed (if the terrazzo was covered with them). Before pouring ATLAS SMS 60 ULTRA on the terrazzo substrate, prime the substrate 24 hours earlier with ATLAS ULTRAGRUNT or 16 hours earlier with ATLAS EPO-S.

Expansion joints

Separate the screed from the walls with an expansion profile. The size of the work sections should not exceed 36 m², and the sides of the sections should not be longer than 6 m. Expansions joints must be made also at thresholds and around pillars and other structural elements. The existing substrate expansion joints should be transferred to the surface of the completed screed.

Preparation of the material

Manual application - pour the material from the bag material into a container with a measured water quantity (proportions given in the Technical Data) and mix until homogeneous, preferably with a slow-running mixer with a mortar mixer, e.g. ATLAS TWIST. Stir again after 5 minutes. The mix retains its properties for approximately 40 minutes. Check the proper consistency by pouring the mortar from a 1 litre container onto even non-absorbent surface (e.g. foil). It should form a “pat” with a diameter of:
- 45-50 cm - addition of mixing water 16%,
- 53-58 cm - addition of mixing water 18.5%,
- 55-60 cm - addition of mixing water 21%.

Machine application - use mixing and pumping units with constant flow water dosing. It is recommended to use a pump with the capacity of 120 l/min (e.g. PFT G4; Kaleta A-5S). Pour the material from the bag into the charging hopper and set a constant water dosing level to achieve the proper consistency. A 1.0 l container can be used to determine the consistency. When poured from a 1 l container onto a levelled non-absorbent surface (e.g. foil), the ready mix should spread to a “pat” with the same diameter as in the case of manual pouring.

Application of the screed
Before starting work, mark the level of the new screed in the rooms. This can be done using e.g. a spirit level and levelling bolts. The prepared mix is then poured evenly up to the determined heights, if possible without breaks. When pouring manually, determine the number of buckets for the preparation of the screed appropriate for the surface of the room. The screed should be poured and de-aerated as quickly as possible, depending on the substrate and conditions, within a maximum of 40 minutes.
When applying the screed manually, excess material should be gathered with a long metal float or squeegee. De-aerate the screed immediately after each work section is completed, for example with a so-called "spiked roller" made of plastic. For screed thicknesses over 20 mm it is recommended to use a dapple bar, also known as tamping bar. The de-aeration should be carried out immediately after pouring the screed.
When pouring mechanically, pour the screed evenly over the entire surface to achieve the desired screed thickness. De-aerate the screed immediately after each work section is completed, in the same way as in the case of manual pouring. Pot life is the same as for manual application.

Underfloor heating – tips (for maintenance)
The screed on prefabricated boards can be heated **7 days** after its application.
Bonded screeds and screeds with hot-water floor heating with a thickness of the screed above the heating system >25 mm can be heated **21 days** after their application. When putting the heating system into operation, please observe the following rules:
- for the first two days the maximum water temperature in the system should not be higher than 5°C above the room temperature and should not exceed 20°C,
- at intervals of 2 days the water temperature can be increased by 5°C until the maximum water temperature is reached, but not to more than 50°C,
- maintain the maximum water temperature for no more than 4 days, then proceed to cool the screed to a heating medium temperature of 20 °C, reducing the temperature by 5 °C at intervals of 2 days.
You can proceed to lay finishing coats 2 days after the screed has cooled down.

Care
Protect freshly applied screed from drying too quickly, direct sunlight, low air humidity or air drafts. In order to ensure favourable setting conditions for the mortar, depending on the curing conditions, sprinkle the newly-made surface with water or cover it with foil. Appropriate care prolongs the drying process but increases the strength of the screed. The drying time of the screed depends on the layer thickness as well as the ambient temperature and humidity conditions. The final colour of the screed may vary depending on the amount of mixing water, the thickness of the applied layer and the temperature and humidity conditions during application and drying of the screed.

Use of the screed:
- it is possible to walk on the screed after approximately 2 hours,
- full service load after 7 days,
- ATLAS SMS 60 ULTRA achieves full mechanical strength after 28 days.

Installation of finishing coats
If there is any laitance on the screed surface (due to overflowing water) or there are irregularities resulting from incorrect compaction during screed application (imprecise tamping), grind and dust the screed before installing finishing coats or pouring another layer of ATLAS SMS 60 ULTRA. **Detailed information on the curing process of the screed ATLAS SMS 60 ULTRA before applying subsequent coats is provided on the last page of the Technical Data Sheet.**

Consumption

On average 1.7 kg of mortar is used per 1 m² and per 1 mm layer thickness.

Packaging

Plastic bags of 25 kg

Safety information

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

Storage and transport

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

The shelf life of the product (use-by date) is 9 months from the date of manufacture on the packaging.

Important additional information

If wrong amount of water, outside the specified range, is used for the preparation of the mix, it will results in:
- lowering the strength parameters of the screed,
- shrinkage cracks,
- laitance on the screed surface. Furthermore, the addition of too much water (over-watering) can cause localised dark discolourations. These are superficial and disappear after sanding. During the works, control the mixing and texture of the mix.

When applying thick-layer screeds on ceilings, the contractor should take into account the impact of additional loads on the building structure.

Tools must be cleaned with clean water immediately after use. Difficult to remove residues of set mortar can be removed with ATLAS SZOP.

The information in the Technical Data Sheet constitutes basic guidelines concerning the use of the product and does not release from the obligation to conduct work according to the best construction practices and health and safety at work regulations. On the date of issue of this Technical Data Sheet, all previous Technical Data Sheets become invalid. The accompanying documents for the product are available at www.atlas.com.pl.

Updated on: 2025-06-10

Detailed information on the curing process of the screed ATLAS SMS 60 ULTRA before applying subsequent coats.

Type of the next covering on the screed	Curing of the screed before laying the respective covering*	Priming the screed before laying the respective covering**
Levelling/filling with ATLAS SMS 60 ULTRA	approx. 24 hours	- ATLAS UNI-GRUNT - ATLAS UNI-GRUNT ULTRA
ceramic tiles (without waterproofing layer)	**Moisture content of the screed 4.0 %** - after approx. 16 hours for a screed thickness of 3-5 mm - after approx. 24 hours for thicknesses between 5-10 mm - after approx. 36 hours for thicknesses between 10-15 mm - after approx. 2 3 days for a screed thickness of 15-30 mm - after approx. 5 days for a screed thickness of 30-60 mm	- ATLAS UNI-GRUNT - ATLAS UNI-GRUNT ULTRA
Waterproofing - ATLAS WODER DUO - ATLAS WODER SX	**Moisture content of the screed 4.0 %** - after approx. 16 hours for a screed thickness of 3-5 mm - after approx. 24 hours for thicknesses between 5-10 mm - after approx. 36 hours for thicknesses between 10-15 mm - after approx. 2 3 days for a screed thickness of 15-30 mm - after approx. 5 days for a screed thickness of 30-60 mm	wet until matt damp
Waterproofing - ATLAS FAST DRYING LIQUID FOIL WODER E - ATLAS LIQUID FOIL WODER W	**Moisture content of the screed 2.0 %** - after approx. 24 hours for thicknesses between 3-5 mm - after approx. 36 hours for thicknesses between 5-10 mm - after approx. 72 hours for thicknesses between 10-15 mm - after approx. 7 days for thicknesses between 15-30 mm - after approx. 10 days for thicknesses between 30-60 mm	- ATLAS UNI-GRUNT - ATLAS UNI-GRUNT ULTRA
parquet PVC flooring carpet flooring laminate flooring	**Moisture content of the screed 2.0 %** - after approx. 24 hours for thicknesses between 3-5 mm - after approx. 36 hours for thicknesses between 5-10 mm - after approx. 72 hours for thicknesses between 10-15 mm - after approx. 7 days for thicknesses between 15-30 mm - after approx. 10 days for thicknesses between 30-60 mm	according to the instructions of the flooring manufacturer
epoxy and polyurethane resin varnished floors, epoxy floors	**Moisture content of the screed 4.0 %** - after approx. 16 hours for a screed thickness of 3-5 mm - after approx. 24 hours for thicknesses between 5-10 mm - after approx. 36 hours for thicknesses between 10-15 mm - after approx. 2 3 days for a screed thickness of 15-30 mm - after approx. 5 days for a screed thickness of 30-60 mm	according to the instructions of the flooring manufacturer

* the times apply to normal application conditions:
- temperature approx. 20 °C
- humidity 55-60%.

** read the Technical Data Sheet of the selected primer