



ATLAS SMS 80

self-levelling floor screed (25 - 80 mm)

- composite, on a separating layer, floating
- for sinking underfloor heating
- under tiles, panels, carpets, epoxy resin flooring
- consumption time of up to 45 minutes



Properties

ATLAS SMS 80 is produced in the form of a dry mix, made on a cement base.

It has **excellent flowability** - ensures a horizontal and smooth surface to be achieved even in large rooms, without the need for screed rails or screeding with levelling board.

Compressive strength: $\geq 20 \text{ N/mm}^2$.

Flexural strength: $\geq 5 \text{ N/mm}^2$.

It is **suitable for manual or machine application** - it can be easily and quickly applied both manually and with machines equipped with auger pumps, thus achieving high efficiency.

It has **very low linear shrinkage** - minimal linear changes in the screed during setting ($\leq 0.6 \text{ mm}$) reduce the possibility of cracking and separation from weak substrates (low adhesion).

A long pot life (45 minutes) gives the contractor comfort, especially on large surfaces.

Intended use

Evening out substrates in the range of 25-80 mm - both when the substrate has only local irregularities and when the entire substrate is made with a slight slope.

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

Suitable for all types of rooms - in “wet” rooms the screed requires waterproofing before laying the floor covering.

Types of floor coverings – tiles, laminate flooring, epoxy floors as well as PVC and carpet coverings.

It is a versatile product and can be used as:

- **levelling layer bonded to the substrate - thickness 25-80 mm** - substrate is good quality concrete, cement (with or without underfloor heating), terrazzo,
- **self-supporting screed on separating layer - thickness 35-80 mm** - when the substrate is poor quality and does not provide adequate adhesion - dusty, cracked, oily, dirty, highly absorbent; the separating layer may be e.g. 0.2 mm thick PE foil
- **floating screed - 40-80 mm thick** - laid on thermal or acoustic insulation made of: polystyrene boards of adequate hardness, hard floor boards made of mineral wool, etc.
- **screed on underfloor heating** - the thickness over the heating layer should be **at least 35 mm** - no additional reinforcement is required.

Technical data

Bulk density (dry mix)	approx. 1.2 kg/dm ³
Mixing ratio water/dry mix	0.16 ÷ 0.18 l / 1 kg 4.0 ÷ 4.5 l / 25 kg
Min./max. screed thickness	25 mm / 80 mm
Maximum diameter of aggregate	2.0 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. 45 minutes*
Foot traffic	after 16 hours*
Full setting and drying time	28 days*

*The times shown in the table are recommended for normal application conditions: temperature of approx. 20 °C and humidity of 55-60%.

Technical requirements

The product complies with EN 13813:2003.

ATLAS SMS 80 (2021) Declaration of performance No. 268/CPR EN 13813:2012	
Intended use: EN 13813 CT-C20-F5 Cement-based floor screed for indoor application	
Reaction to fire (in case of exposure)	A1 _{fl}
Release of corrosive substances	CT
Compressive strength - class	C20
Flexural strength - class	F5

Making the screed

Substrate and room preparation

Due to the liquid consistency of the screed, the substrate must be basin-shaped, i.e. protected against flowing out of the compound. In addition, the substrate should be dry, stable, without cracks, load-bearing and have a dry surface.

Application of the product should be carried out with windows closed, heating reduced and avoiding drafts. Such conditions should be maintained for at least 3 days of screed setting in order to eliminate too rapid surface drying.

Requirements for bonded subfloors.

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

Unevenness of the substrate (recesses and cavities) should be levelled with ATLAS ZW 330 mortar. Dry, repaired substrate should be vacuumed, carefully primed, e.g.:

- ATLAS GRUNT NKP (ready to use - without dilution),
- ATLAS UNI-GRUNT ,
- ATLAS UNI-GRUNT COLOUR,
- ATLAS UNI-GRUNT ULTRA .

Non-absorbent mineral substrates such as terrazzo or smooth concrete should be degreased, layers of pastes and impregnating agents should be removed, and, in the case of concrete substrates, residues of release agents. Before laying ATLAS SMS 80 on non-absorbent substrates with reduced adhesion, they should be covered with ATLAS ULTRAGRUNT and left to dry for at least 4 hours (at the temperature of ca. 20 °C and humidity of 55-60%.

Requirements for the screed on the separating layer. The layer of separating material, e.g. PE foil, should be laid tightly without folds and turned up on the walls on the perimeter expansion joint strips at least 10 cm above the designated level of the sleeper surface. Lay the PE foil overlapping by at least 10 cm and seal the joints with tape.

Requirements for a floating screed over thermal or acoustic insulation. For thermal or acoustic insulation, use only material designed for this purpose, with the appropriate strength parameters. The insulation layer must be laid on a level base to prevent sags and stresses that could damage the subfloor. The sheets of insulation material should adhere tightly to each other. Subsequent rows of boards should be laid with staggered joints, avoiding crossing board joints. The boards used should be of the same thickness.

Requirements for a floating screed on underfloor heating. The underfloor heating tubes must be securely fastened to the insulation layer with anchor clips. Before the screed is laid, a pressure leakage test must be carried out. When laying the screed, the system should have the working pressure specified for this type of system. This will reduce the risk of mechanical damage to the heating pipes. In addition, a water-filled heating system does not tend to float to the surface.

The individual underfloor heating circuits should be separated from each other by expansion joints.

Peripheral expansion joints. Peripheral expansion joints around the walls of the room should be made of flexible foam with a minimum thickness of 7 mm. Around pillars, pipes, columns and other elements, peripheral expansion joints should be made of at least double foam with a minimum thickness of 7 mm.

	Composite screed	Screed on the separating layer	Screed on the separating layer and with underfloor heating
Maximum size of an expansion area	36 m ²	25 m ²	25 m ²
Maximum length of an expansion area	8 m	6 m	6 m
Maximum side ratio	1:2	1:2	1:2

Attention:

T-shaped cuts should be made at the corners of structural columns or at sharp wall corners. Expansion joints must also be made at room thresholds. The above-described expansion joints can be made by incising the screed after the screed has initially set.

Preparation of the screed material

Machine application - use mixing and pumping units with constant flow water dosing. A pump with a capacity of 60 l/min is recommended. Pour the material from the bag into the hopper and set a constant level of dosed water to achieve the correct consistency. When setting the consistency, you can use a container with a capacity of 0.5 l or 1.0 l. The prepared mixture poured from a 0.5 l container onto a levelling nonabsorbent surface (e.g. foil) should form a "cake" of 30-35 cm in diameter (in the case of a 1.0 l container - 45±50 cm, respectively).

Manual application - pour the material from the bag into a container with measured amount of water (proportions are given in the Technical Data) and mix until a homogeneous mass is obtained, preferably using a slow speed mixer with a mortar mixer, e.g. ATLAS TWIST. Stir again after 5 minutes. The mass retains its properties for approximately 45 minutes. Check the correct consistency by pouring the mortar from a container with a capacity of 1 litre on an even, non-absorbent surface (e.g. foil). It should form a "cake" of approx. 45±50 cm in diameter.

Application of the screed

Before starting the work, the future thickness of the subfloor (on the walls and in the execution field) must be determined indoors. This can be done, for example, by using a spirit level and portable height markers. The prepared compound is poured evenly up to the set heights, avoiding gaps. The laying area should be prepared in such a way that it can be made and ventilated in approx. 45 minutes.

When applying manually, the excess material should be compacted to itself using a long metal float. De-aerate the material immediately after each work section, e.g. with the so-called "spiked roller" made of plastic. For substrate thicknesses over 20 mm, it is recommended to use a dapple bar, also known as tamping bar

Maintenance

The optimum conditions for curing the screed are a temperature of 10-25 °C. The freshly made screed should be protected against too rapid drying, direct sunlight, low air humidity or draughts. In order to ensure favourable binding conditions for the mortar, the freshly made surface should be covered with foil as required (for a maximum of 3 days). Adequate care prolongs the drying process, but leads to an increase in the strength of the product. The drying time of the screed depends on the thickness of the layer and the heat and humidity conditions in the surroundings. The screed can be walked on after approximately 16 hours.

Underfloor heating - tips (aftercare)

Warming up the screed can be started after:

- 4 weeks after the 25-40 mm thick screed,
- 5 weeks after the 41-60 mm thick screed,
- 6 weeks after the 61-80 mm thick screed.

Start-up of the heating should be carried out according to the following rules:

- for the first two days the maximum water temperature in the system should be no more than 5 °C above room temperature and no more than 20 °C in the room and no more than 20 °C,
- In intervals of 2 days, the water temperature can be increased by 5 °C until the maximum water temperature is reached, but not 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.

The floor can be laid 2 days after the subfloor has cooled down.

Execution of finishing layers

If the surface of the poured substrate is milky due to water overflow or irregularities appear due to If the surface of the poured substrate was milky due to water overflow or unevenness appeared as a result of compaction errors at the laying stage (inaccurate tamping), the substrate should be sanded and dusted off before the finishing layers or the next layer of ATLAS SMS 80 is added.

For detailed information on the seasoning of ATLAS SMS 80 screed prior to application of subsequent coats, please refer to the last page of the Technical Data Sheet.

Consumption

On average, 18 kg of mortar is used per 1 m² and for every 10 mm of layer thickness.

Packaging

25 kg plastic bags.

Safety information

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

Storage and transport

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

Shelf life (shelf life) of the product is 9 months from the production date on the packaging.

Important additional information

The use of the wrong amount of water for the preparation of the compound leads to a reduction in the strength parameters of the screed. In addition, the addition of too much water (overflow) can result in localised dark discolourations. These are superficial and disappear after sanding. When carrying out the work, the degree of mixing and the consistency of the compound must be controlled.

Tools should be cleaned with clean water, immediately after use.

The information contained in the Technical Data Sheet is a basic guide to the use of the product and does not release the user from the obligation to carry out the work in accordance with the rules of the trade and in compliance with health and safety regulations. With the issue of this Technical Data Sheet, all previous ones are no longer valid. The documents accompanying the product are available at www.atlas.com.pl.

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

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Detailed information on the seasoning of ATLAS SMS 80 screed prior to subsequent coats.

Type another layer on top of the screed	Seasoning of the substrate before application of the layer in question*	Priming the screed before the layer in question was applied**
Levelling/filling with ATLAS SMS 15	<p>Moisture content of the screed 4.0</p> <ul style="list-style-type: none"> - after approx. 4 days for a substrate thickness of 25-40 mm with SMS 80 - after approx. 6 days for a substrate thickness of 41-60 mm with SMS 80 - after approx. 9 days for a substrate thickness of SMS 80 61-80 mm 	<ul style="list-style-type: none"> - ATLAS GRUNT NKP (ready to use) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOUR - ATLAS UNI-GRUNT ULTRA
Levelling/filling with ATLAS SMS 30	<p>Moisture content of the screed 4.0</p> <ul style="list-style-type: none"> - after approx. 4 days for a substrate thickness of 25-40 mm with SMS 80 - after approx. 6 days for a substrate thickness of 41-60 mm with SMS 80 - after approx. 9 days for a substrate thickness of SMS 80 61-80 mm 	<ul style="list-style-type: none"> - ATLAS GRUNT NKP (ready to use) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOUR - ATLAS UNI-GRUNT ULTRA
Levelling/filling with ATLAS SMS 80	<p>Moisture content of the screed 4.0</p> <ul style="list-style-type: none"> - after approx. 4 days for a substrate thickness of 25-40 mm with SMS 80 - after approx. 6 days for a substrate thickness of 41-60 mm with SMS 80 - after approx. 9 days for a substrate thickness of SMS 80 61-80 mm <p>Note: maximum total thickness of ATLAS SMS 80 after topping up is 100 mm</p>	<ul style="list-style-type: none"> - ATLAS GRUNT NKP (ready to use) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOUR - ATLAS UNI-GRUNT ULTRA
ceramic cladding (without waterproofing layer)	<p>Moisture content of the screed 4.0</p> <ul style="list-style-type: none"> - after approx. 4 days for a thickness of 25-40 mm - after approx. 6 days for a thickness of 41-60 mm - after approx. 9 days for a thickness of 61-80 mm 	<ul style="list-style-type: none"> - ATLAS GRUNT NKP (ready to use) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOUR - ATLAS UNI-GRUNT ULTRA
Waterproofing - ATLAS WODER DUO - ATLAS WODER DUO EXPRESS - ATLAS WODER SX	<p>Moisture content of the screed 4.0</p> <ul style="list-style-type: none"> - after approx. 4 days for a thickness of 25-40 mm - after approx. 6 days for a thickness of 41-60 mm - after approx. 9 days for a thickness of 61-80 mm 	moistening to a dull wet state
Waterproofing - ATLAS WODER E - ATLAS WODER W - ATLAS QUICK-DRYING LIQUID FILM	<p>Moisture content of the screed 2.0</p> <ul style="list-style-type: none"> - after approx. 9 days for a thickness of 25-40 mm - after approx. 14 days hours for a thickness of 41-60 mm - after approx. 21 days for a thickness of 61-80 mm 	<ul style="list-style-type: none"> - ATLAS GRUNT NKP (ready to use) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOUR - ATLAS UNI-GRUNT ULTRA
PVC lining carpeting panels	<p>Moisture content of the screed 2.0</p> <ul style="list-style-type: none"> - after approx. 9 days for a thickness of 25-40 mm - after approx. 14 days for a thickness of 41-60 mm - after approx. 21 days for a thickness of 61-80 mm 	as recommended by the finishing coat manufacturer
epoxy coating/flooring	<p>Moisture content of the screed 4.0</p> <ul style="list-style-type: none"> - after approx. 4 days for a thickness of 25-40 mm - after approx. 6 days for a thickness of 41-60 mm - after approx. 9 days for a thickness of 61-80 mm 	as recommended by the finishing coat manufacturer

* times recommended for normal application conditions:

- temperature of approx. 20 °C- humidity 55-60%.

** refer to the Technical Data Sheet of the product selected for priming

Attention. In the case of a subfloor made with underfloor heating, the floor layers can be laid only after the subfloor has been warmed up. The rules for warming up the ATLAS SMS 80 subfloor can be found above in the paragraph "Making the subfloor".