ATLAS SMS 80

self-leveling floor screed (25 – 80 mm)

- bonded, on the separating layer, floating
- for underfloor heating system
- for tiles, panels, carpets, epoxy floors
- pot life up to 45 minutes

Properties

ATLAS SMS 80 is manufactured as a dry mix based on cement.

Perfect spreading – ensures perfectly smooth and levelled surfaces even in large rooms, no battens nor screeding level needed.

Compressive strength: ≥ 20.0 N/mm².

Flexural strength: ≥ 5.0 N/mm².

Suitable for manual and mechanical application – easy and quick application manually and mechanically. High application efficiency is reached with helical pump units.

Very low linear contraction - minimum change in linear dimensions during screed drying (≤ 0.6 mm/rm) limits the risk of cracking and loosening of weakened substrates.

A long pot life (45 minutes) ensures comfort of application, particularly on large surfaces.

Intended use

Levelling of substrates within a range of 25-80 mm – both when the substrate has only local irregularities and when the entire substrate has 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 top coat.

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

It is a universal product and can be used as:
- levelling layer bonded to the substrate – thickness 25 - 80 mm – when the substrate is of good quality, e.g.: concrete (with or without underfloor heating), terrazzo, etc.
- self-supporting screed on a separating layer – thickness 35-80 mm – when the substrate is of poor quality and does not ensure proper adhesion - e.g.: dusty, cracked, oily, dirty, highly absorbent; the separating layer may be e.g. PE foil 0.2 mm thick
- floating screed - thickness 40-80 mm - laid on thermal or sound insulations made of: polystyrene foam boards of adequate hardness, hard floor boards made of mineral wool, etc.
- screed on underfloor heating – thickness over the heating layer or jus pipes should be **at least 35 mm** - it does not require additional reinforcement.

Technical data

Bulk density (of dry mix)	approx. 1,2 kg/dm³
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 aggregate size	2,0 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. 45 minutes*
Foot traffic	after 16 hours*
Full setting and drying	28 days*

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

Technical requirements

The product conforms to PN-EN 13813:2003 standard.

ATLAS SMS 80 (2021) Declaration of Performance no 268/CPR EN 13813:2012	
Intended use: EN 13813 CT-C20-F5 Cement-based screed, for interior use.	
Reaction to fire (in case of exposure)	$A1_{fl}$
Corrosive substance release	CT
Compressive strength – class	C20
Flexural strength - class	F5

Screed installation

Substrate preparation and the room

Due to the fluid consistency of the screed, the substrate must be basin-shaped, so that the mass cannot flow out. In addition, the substrate should be dry, stable, without cracks and have weightbearing capacity and a dry Surface.

The product should be applied with the windows closed, with lowered heating parameters, avoiding drafts. Such conditions should be maintained for min. 3 days of bonding of the primer to eliminate too fast drying on the surface.

Requirements for screeds bonded to the substrate.

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

The substrate must be clean and free of dust. Any residues of cement slurry on the substrate must be removed. Irregularities on the substrate should be levelled with ATLAS ZW 330 or ATLAS TEN 10 mortar. Dry and repaired substrates should be primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT ULTRA emulsion and left to dry. Non-absorbent mineral substrates such as terrazzo or smooth concrete should be degreased, layers of pastes and impregnating agents should be removed and in case of concrete substrates residues of release agents should be removed. Before application ATLAS SMS 80 on non-absorbent substrates with reduced bonding strength, the substrate should be primed with ATLAS ULTRAGRUNT and left to dry for minimum 4 hours (at temperature of ca. 20 °C and humidity of 55-60%).

Requirements for screeds on a separating layer.

The separating layer, e.g. PE foil, should be laid tightly without folds and turned up on the walls on circumferential expansion joints up to at least 10 cm above the designated level of the screed surface. The PE foil should be laid with overlaps of minimum 10 cm and the joints sealed with tape.

Requirements for floating screeds on thermal or acoustic insulations. For thermal or acoustic insulation, use only materials intended for that purpose, with appropriate strength parameters. The insulation layer should be laid on a levelled substrate to prevent deflections and stresses that could damage the substrate. The insulation panels should adhere tightly to each other. Lay the successive rows of boards with staggered joints to avoid crossings of board joints. The insulation boards should be of the same thickness.

Requirements for floating screeds on underfloor heating.

The underfloor heating pipes must be securely fastened to the insulation layer with pipe clamps. A pressure tightness test must be carried out before laying the screed. While laying the screed, the system should have the operating pressure specified for the respective type of system. This will reduce the risk of mechanical damage to the heating pipes. In addition, a heating system filled with water does not tend to float to the surface. Individual underfloor heating circuits should be separated from each other with expansion joints.

Peripheral expansion joints.

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

	Bonded screed	Screed on a separating layer	Screed on a separating layer with underfloor heating
Maximum size of an expansion area	36 m²	25 m²	25 m²
Maximum length of an expansion area	8 m	6 m	6 m
Maximum aspect ratio	1:2	1:2	1:2

Note: T-shaped expansion joints should be made at the corners of structural columns or at sharp wall corners. Dilatation joints must also be made at thresholds. The above-mentioned expansion joints can be made by cutting the screed after the initial setting of the screed.

Preparation of the screed material

Machine application - use mixing and pumping units with constant flow water dosing. It is recommended to use a pump with the capacity of 60 l/min. Pour the material from the bag into the charging hopper and set a constant water dosing level to achieve the proper consistency.

Proper consistency can be verified with 0.5 l or 1 l container. The prepared mix, poured from a 0.5 l container onto even, non-absorptive substrate (e.g. foil) should form approx. 30 ÷ 35 cm diameter patch (for 1,0 l container - 45 ÷ 50 cm).

Manual application – pour the mortar into a container with water (see Technical Data for ratio) and mix with low-speed mixer with a drill for mortars, until homogenous. Remix after 5 minutes. The mass retains its properties for about 45 minutes. Proper consistency should be verified by pouring the mass from 1 l container onto an even, non-absorptive substrate (e.g. foil). It should form a “patch” of approx. 45 ÷ 50 cm diameter.

Screed application

Before application, the intended screed thickness should be marked (on walls and in the application area), which can be done with a spirit 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. 45 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 deaerated with a spike roller. For screeds of thickness above 20 mm it is advisable to use a dappling bar. It is recommended to perform de-aeration in two perpendicular directions just after the mass application.

Maintenance

The optimal conditions for the maturation of the layer are 10-25 ° C. Fresh screed should be protected against excessive drying, direct sunlight, low air humidity or draughts. In order to ensure favourable conditions for screed setting sprinkle surface with water or cover it with foil (for a maximum of 3 days). Proper maintenance leads to increase of strength of product but also extends the time of drying. Time of drying depends on layer thickness and ambient thermal and humidity conditions. Foot traffic is possible after approx. 16 hours.

Underfloor heating – tips (for maintenance)

The heating of the screed can be started 6 weeks after application. When putting the heating into operation, please observe the following rules:

- for the first two days the maximum water temperature in the system should not be more than 5 °C above the room temperature and not 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 to more than 50 °C,
- maintain the maximum water temperature for no more than 4 days, then proceed to cool down the screed to a heating medium temperature of 20 °C, reducing the temperature by 5 °C at intervals of 2 days.

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

Carry out of finishing layers

If the surface of the poured primer was milky due to overflow of water or irregularities appeared due to
as a result of compaction errors at the stage of laying (inaccurate tamping), then the primer should be sanded and dusted off before making finishing coats or pouring another layer of ATLAS SMS 80.
Detailed information on seasoning the ATLAS SMS 80 primer before making the next layers can be found on the last page of the Technical Data Sheet.

Consumption

Average consumption is 18 kg of mortar for 1 m²/10 mm layer thickness.

Packaging

Foil bags 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.

Shelf life is 9 months from the production date shown on the packaging.

Important additional information

Inappropriate amount of mix water results in deterioration of strength parameters of screed. Moreover, the use of too much mix water (overwatering) can cause local dark discolouration. This discolouration is only surficial 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. Difficult to remove remains of set mortar can be washed with ATLAS CEMENT AWAY agent.

The information included in the Product 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 Product Data Sheet, all previous Product Data Sheets become invalid. The accompanying documents for the product are available at www.atlas.com.pl.

Updated: 2022-01-31

Detailed information on the curing process of the screed ATLAS SMS 80 before applying subsequent coats.

Type of the next covering on the screed	Curing of the screed before laying the respective covering *	Priming of the screed before laying the respective covering
Levelling/filling with ATLAS SMS 15	**Moisture content of the screed 4,0 %** - after approx. 4 days for thicknesses between 25-40 mm - after approx. 6 days for thicknesses of SMS 80 between 41-60 mm - after approx. 9 days for thicknesses of SMS 80 between 61-80 mm	ATLAS UNI-GRUNT, ATLAS UNI-GRUNT ULTRA diluted with water 1:3
Levelling/filling with ATLAS SMS 30	**Moisture content of the screed 4,0 %** - after approx. 4 days for thicknesses of SMS 80 between 25-40 mm - after approx. 6 days for thicknesses of SMS 80 between 41-60 mm - after approx. 9 days for thicknesses of SMS 80 between 61-80 mm	ATLAS UNI-GRUNT, ATLAS UNI-GRUNT ULTRA diluted with water 1:3
Levelling/filling with ATLAS SMS 80	**Moisture content of the screed 4,0 %** - after approx. 4 days for thicknesses of SMS 80 between 25-40 mm - after approx. 6 days for thicknesses of SMS 80 between 41-60 mm - after approx. 9 days for thicknesses of SMS 80 between 61-80 mm **Note:** the maximum total thickness of ATLAS SMS 80 after refilling is 100 mm.	ATLAS UNI-GRUNT, ATLAS UNI-GRUNT ULTRA diluted with water 1:3
ceramic tiles (without waterproofing)	**Moisture content of the screed 4,0 %** - after approx. 4 days for thicknesses between 25-40 mm - after approx. 6 days for thicknesses between 41-60 mm - after approx. 9 days for thicknesses between 61-80 mm	ATLAS UNI-GRUNT or ATLAS UNI-GRUNT ULTRA when the substrate has excessive or non-uniform absorbency
Waterproofing - ATLAS WODER DUO - ATLAS WODER DUO EXPRESS	**Moisture content of the screed 4,0 %** - after approx. 4 days for thicknesses between 25-40 mm - after approx. 6 days for thicknesses between 41-60 mm - after approx. 9 days for thicknesses between 61-80 mm	wet until matt damp
Waterproofing - ATLAS WODER E - ATLAS WODER W - ATLAS SZYBKOSCHNĄCA FOLIA W PŁYNIE	**Moisture content of the screed 2,0 %** - after approx. 9 days for thicknesses between 25-40 mm - after approx. 14 days for thicknesses between 41-60 mm - after approx. 21 days for thicknesses between 61-80 mm	ATLAS UNI-GRUNT or ATLAS UNI-GRUNT ULTRA – when the substrate has excessive or non-uniform absorbency
PVC flooring carpet flooring panels	**Moisture content of the screed 2,0 %** - after approx. 9 days for thicknesses between 25-40 mm - after approx. 14 days for thicknesses between 41-60 mm - after approx. 21 days for thicknesses between 61-80 mm	according to the instructions of the flooring manufacturer
epoxy flooring	**Moisture content of the screed 4,0 %** - after approx. 4 days for thicknesses between 25-40 mm - after approx. 6 days for thicknesses between 41-60 mm - after approx. 9 days for thicknesses between 61-80 mm	according to the instructions of the flooring manufacturer

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