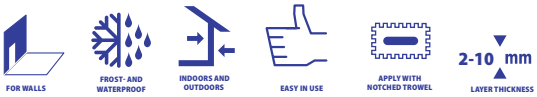
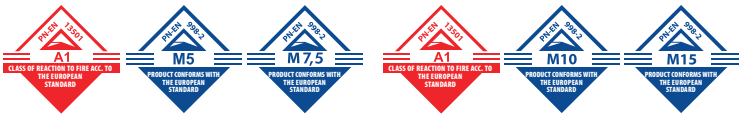
ATLAS SILMUR

masonry mortars for silicate elements

- for walls made of silicates and cellular concrete
- white or grey
- for surface floating
- 4 classes of compressive strength
- can be used in low temperature (SILMUR M-15 only)





Use

The mortar is available in four versions differing in compressive strength:
ATLAS SILMUR M-5 ≥ 5.0 N/mm^2
ATLAS SILMUR M-7.5 ≥ 7.5 N/mm^2
ATLAS SILMUR M-10 ≥ 10.0 N/mm^2
ATLAS SILMUR M-15 ≥ 15.0 N/mm^2
ATLAS SILMUR M-10 and M-15 are available on customer order only.
Recommended for constructing walls of silicate elements (all versions), cellular and aerated concrete (SILMUR M-10, M-7.5 and M-5).
Used for bricklaying with thin joints – recommended joint thickness from 2 up to 10 mm (optimum thickness: 2-3 mm).
Used for surface floating and leveling - with recommended coat thickness 2-5 mm.
ATLAS SILMUR M-15 can be used in low temperature – not less than 0 °C during application and not less than -10 °C after 8 hours since the application.
Note: work in low temperature reduces the strength parameters of the mortar.

Types of masonry elements – silicate, cellular and aerated concrete, bricks, hollow blocks and other similar ceramic and concrete materials.

Properties

Available in two colour versions – each ATLAS SILMUR version is available in white and grey colour.
Easy and convenient in use – characterised by very good workability, plasticity and excellent bonding.
High yield – the layer thickness can be monitored when applied with a notched trowel or a dispenser. It results in reduced mortar consumption and speeds up the work progress.

Technical data

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

Bulk density (of dry mix)	approx. 1.50 kg/dm^3
Mass bulk density (after mixing)	approx. 1.75 kg/dm^3
Dry density (after setting)	approx. 1.55 kg/dm^3
Mixing ratio (water/dry mix)	0.20 ÷ 0.24 l/1 kg 5.0 ÷ 6.0 l/25 kg
Min./max. mortar thickness	2 mm / 10 mm
Mortar preparation temperature, substrate and ambient temperature during work	from +5°C to +30°C from 0°C to +30°C for SILMUR M-15
Pot life	approx. 4 hours

Technical requirements

The product conforms to PN-EN 998-2 standard. EC Declaration of Performance No. 090-1/CPR for SILMUR M-10, No. 090-2/CPR for SILMUR M-15, No. 090-3/CPR for SILMUR M-5 and No. 090-4/CPR for SILMUR M-7.5.

CE 1488	PN-EN 998-2:2012 (EN 998-2:2010)
Factory-made masonry mortar, manufactured acc. to design (SILMUR M-10 and M-15) and acc. to recipe (SILMUR M-5 and M7.5), for thin joints (T)	for indoor and outdoor use, in elements subject to structural requirements, designed for reinforced and un-reinforced walls, on masonry walls, posts and partition walls
Compressive strength SILMUR M5 SILMUR M7.5 SILMUR M-10 SILMUR M-15	 ≥ 5.0 N/mm^2 ≥ 7.5 N/mm^2 ≥ 10.0 N/mm^2 ≥ 15.0 N/mm^2
Initial shear strength (tabular value)	≥ 0.3 N/mm^2
Chloride content	0.07% Cl (SILMUR M-10 and M-15) ≤ 0.1% Cl (SILMUR M-5 and M-7.5)
Reaction to fire - class	A1
Water absorption	0.05 kg/m^{2}min^{0,5}
Water vapour permeability coefficient (tabular value μ)	15/35 (EN 1745:2002, table A.12)
Thermal conductivity coefficient (average tabular value P=50%)	0.83 W/mK ($\lambda_{10, dry}$) (EN 1745:2002, table A.12)
Adjustability	≥ 10 minutes
Aggregate grain size	≤ 1.6 mm
Durability. - Compressive strength decrease after freeze-thaw cycles - Mass decrement after freeze-thaw cycles	 ≤ 10% ≤ 3%
Ingredients ratio for SILMUR M-5 and M-7.5 (by weight)	Cement:fillers 1:3 Additives below 1%
Release/content of hazardous substances	See: Safety Data Sheet

The product has been given the Radiation Hygiene Certificate.

Bricklaying

Preparation of silicate elements

Bricklaying. Clean the surfaces of joined elements of dust and any loose fragments. In order to form thin joint of uniform thickness, it is recommended to sand and dust the surface of previously laid elements.

Surface floating. The surface should be dry, stable, even and sound, i.e. sufficiently strong and cleaned of materials which would impair mortar bonding, especially dust, dirt, lime, oil, fats, wax, residues of oil or emulsion paint. Substrates characterised by excessive absorbability should be primed with ATLAS UNI-GRUNT emulsion.

Weather conditions

Consider weather conditions during bricklaying as well as during mortar setting and drying.

Mortar preparation

Pour the mortar from the bag into a clean container with the suitable amount of water (see Technical Data for ratio) and mix using a mixer with a drill (or in cement mixer) until homogenous. Leave the mortar to rest for 5 minutes and remix. The mortar should be used up within approx. 4 hours.

Bricklaying

Use ATLAS MASONRY MORTAR for the first layer laying and leveling. Apply ATLAS SILMUR layer with a notched trowel evenly onto horizontal plane of the previously executed layer. Apply also the mortar on the vertical contact surfaces of blocks, unless otherwise specified. Press each subsequent element firmly and tap into place using a rubber mallet.

Consumption

Bricklaying

Examples of consumption for blocks 20 cm laid with horizontal joint only

Homogenous wall thickness	Joint thickness approx. 3 mm	Coverage from a 25 kg bag
12 cm	approx. 2.0 kg/m^2	approx. 12.5 m^2
18 cm	approx. 3.0 kg/m^2	approx. 8.3 m^2
24 cm	approx. 4.0 kg/m^2	approx. 6.25 m^2
30 cm	approx. 5.0 kg/m^2	approx. 5.0 m^2
36 cm	approx. 6.0 kg/m^2	approx. 4.16 m^2

Floating

The average consumption is approx. 1.6 kg for 1m^2 for 1 mm layer thickness.

Important additional information

- Do not apply the mortar over a large surface in a single operation, because it retains its bonding properties within approx. 10 ÷ 30 minutes since spreading (depending on substrate properties and ambient conditions). In order to check if joining the blocks is still possible, conduct a test - press the applied mortar with fingers. If the mortar sticks to fingers, then you can fix the next element. If the fingers remain clean, the mortar must be removed and the new layer applied.
- Adjust the ratio of added water experimentally (keeping the ratio listed in the Technical Data section), following the desired consistency of the mortar, type of substrate and weather conditions. Inappropriate amount of mix water results in deterioration of strength parameters of the mortar.
- Tools must be cleaned with clean water directly after use. Difficult to remove residues of the set mortar can be removed with the ATLAS SZOP agent.
- Contains cement. May cause respiratory irritation. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Keep out of reach of children. Avoid breathing dust. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or a rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Follow the instructions of the Safety Data Sheet.
- The mortar must be transported and stored in tightly sealed bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

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

The above information constitutes basic guidelines for the application of the product and does not release the user from the obligation of carrying out works according to engineering principles and OHS regulations.
At the time of publication of this product data sheet all previous ones become void.
Date of update: 2014-05-22