



Technical data sheet

Material

STILNEX is a nanocomposite material characterized by high thermal and acoustic performances and it's composed of cellular glass and nano-binders.

This product is highly eco-friendly allowing to reach thermal insulation, acoustic absorption and insulation parameters in only one product.

For further information, please look at the brochure on www.trimaterials.com.

General information

Granulometry:	0 - 2 mm	
Appearance - Colour:	Powder - grey and brown	
Components:	Cellular glass, lime, inorganic nanocomposites	
Quantity of water needed for the mixture :	Mix 50% of H ₂ O for 3 minutes	
Binder:	High-performance hydraulic binder, total lack of Portland concrete - it allows the usage in internal/external environments.	
Packaging:	12,5 kg Paper bag / even on 500 Kg pellet	
Application:	By hand	Mechanical
Application Temperature:	5 - 30 °C	
Yield:	4,00 Kg/m ³	Values referred to 1 cm in thickness
Lowest thickness:	4 cm	
Setting time:	45 min.	Values referred to a temperature of 20 °C and a moisture of 50%
Hardening time:	< 2,5 ore	

Fields of application

- Specific plaster for inside and outside walls for acoustic absorption and thermal insulation
- **STILNEX** can be used in historical-artistic buildings such as churches, historical palaces and so on...
- Suitable supports: solid, perforated, new and old brick masonries; poroton, stone, mixed and rubble walls; concrete and steel reinforced concrete by paying attention to process the oxidized rebar before the usage



T: Mortar for thermal insulation



STILNEX is an official brand TRI Tecnologia e Ricerca Italiana

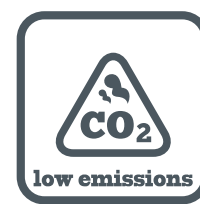
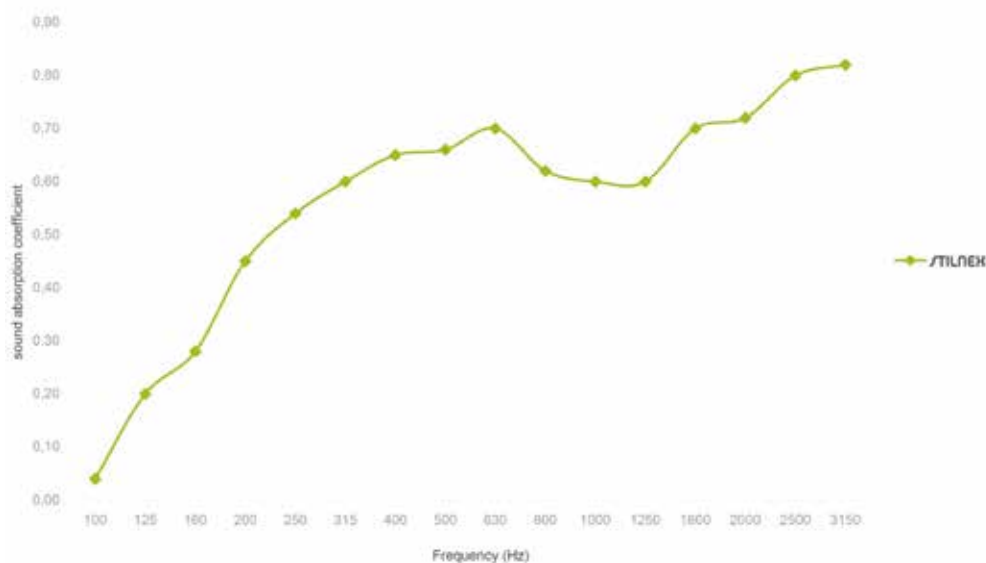
TRI Via Malta 12/0, 25124 Brescia, Phone +39 030 2451034, Fax +39 030 2450862, Mail: info@trimaterials.com



STILNEX

	Standard	MU	Value	Observations
Atmosphere pressure H ₂ O absorption	UNI 7699	[%]	20 (mass); 7,2 (volum)	
Porosity	laboratory data	[%]	71,2	
Adherence onto support	UNI EN 1015-12	[N/mm ²]	0,5	Tested on solid brick and concrete
α_w - weighted alpha	UNI EN ISO 11654		0,70	
Hardened mortar flexural strength	UNI EN 1015-11	[N/mm ²]	0,91	
Hardened mortar compressive strength	UNI EN 1015-11	[N/mm ²]	5,41	
Thermal conductivity	UNI EN 12667	[W/mK]	0,081	
Transmission loss (STILNEX 5cm+Brick 25cm+STILNEX 2cm)	laboratory data	[dB]	59,5	
Traspirabilità	laboratory data	[μ]	5	
Density	laboratory data	[Kg/m ³]	410	
Setting time	UNI EN 1015/9	[min]	45	
Fire resistance	UNI EN 998-1		A1 Class	
Wet mortar density	UNI EN 1015-10	[Kg/m ³]	470-500	
Dry mortar density	UNI EN 1015-10	[Kg/m ³]	400-410	

EXPERIMENTAL SOUND-ABSORPTION COEFFICIENT GRAPH



Because of the variation of raw materials used there it should be slight change in the above data. This cannot concern our Company. We can change any specifications to improve material qualities without any preventive communication always in respect of our unconditional evaluation.



STILNEX is an official brand TRI Tecnologia e Ricerca Italiana

TRI Via Malta 12/O, 25124 Brescia, Phone +39 030 2451034, Fax +39 030 2450862, Mail: info@trimaterials.com



Application

Essential tools

In addition to classic tools for the application of any civil plaster, the intention is to emphasize the following:

- **STILNEX** is a very light material. For this reason, the usage of a concrete mixer is recommended in order to avoid compound settling. Otherwise, use a mixer, for the necessary time, to make a consistent mixture;
- always use a **classic scale** (at least 20 kilos) with precision of 1 kilo, otherwise use a **gradable container** of 7 litres in order to measure water.

The precision of the water used for the mixture is decisive for the quality of the work.

CAUTION: incorrect percentages of the water make the product inapplicable.

Preparation of the support

N.B. Suitable supports: solid, perforated, new and old brick masonries; poroton, stone, mixed and rubble walls; concrete and steel reinforced concrete by paying attention to process the oxidized rebar before the usage.

- the underlayer must be completely hardened, dry and equipped with an adequate strength;
- in presence of an existing no painted plaster, take care that this is solid and completely attached to the underlayer;
- **STILNEX** plaster must not be used on painted surfaces, remove the existing finishing completely;
- if the plaster is detaching, even if only partially, completely remove it;
- if applied on smooth surfaces (concrete pillars, existing plasters, wood), it is necessary to scrape them mechanically in order to increase the surface porosity;
- the support temperature must be between +5 °C and +35 °C;
- when the support is clean, wash the surface to plaster by using preferably the high-pressure cleaner..





Implementation

Mixing:

- If a concrete mixer is used, add 50% of water to the dried mixture (6,25 liters per paper bag) and mix for 3 minutes. In the event that a mixer by hand is used, firstly insert the powder, secondly add water gradually.

CAUTION: mixing **STILNEX** with other products (additives, lame, concrete...) is strictly forbidden

Application by hand:

- wet the surface abundantly – specially walls exposed to sun and in the summer period;
- apply a layer of 0.5 – 1 cm of **STILNEX** by using a trowel. Pay attention to press the material on the basis in order to improve the adhesion;
- it is important to use the angle profiles before the last layer is applied;
- apply the remaining layers in order to produce the desired result. Take into account that every layer should be up to 2,5 cm in thickness. The application of the next layer will take place after the previous one has hardened, after about 4 hours. For layers with a thickness of more than 4 cm, use the plaster hold mesh every 3 cm in thickness;
- always wet the plaster before every layer is applied.

Drying times:

- at a temperature of 20° C and relative moisture of 50%, the product hydrates completely in 15 days;
- hydration times are influenced by the relative humidity of the environment and the temperature. They should significantly change;
- in the case of high temperatures and strong wind, it necessary to wet even 2-3 times a day and for the next 2-3 days after the application;
- for temperatures of more than 28 °C, wet the plaster every 2 hours in order to avoid cracks.

Finishes

STILNEX is a monolayer plaster. It can be finished by following the water percentages shown in the table and using a sponge-trowel for the coat of the final layer.

CAUTION: finishing quality could have an appreciable effect on absorption parameters and acoustic insulation. Ask the finishing producer for acoustic data of the material.