SMOOTHERS – mortar

ARGATHERM ACOUSTIX

Lightweight acoustic finishing smoother with thermal mineral fillers and natural microfibers

Lightweight acoustic finishing smoother composed of spherical expanded mineral fillers with a microporous internal structure that give the product an extraordinary lightness, thermal insulation and sound-absorbing properties. In addition, *Argatherm Acoustix* is composed of aggregates with particle size 0 - 0.6 mm and natural microfibers (250 µm), totally harmless to the environment and human health. The right selection of the aggregate size, the microfiber matrix and the use of specific additives ensure high workability during application and excellent adhesion to the supports. Suitable for internal surfaces, *Argatherm Acoustix* fine skim coat designed to create smooth surfaces with sound-absorbing properties.

BENEFITS

- Excellent characteristic of acoustic absorption: **NRC 0,5** in combination with *Diathonite Acoustix* (thickness: 3 cm);
- Excellent characteristics acoustic of acoustic absorption **NRC 0,65** in combination with *Diathonite Acoustix*$^+$ (thickness: 3 cm);
- Light and with thermal features: category T2 ≤ 0.2 W/mK.
- Natural raw materials, harmless for the environment and for human health.
- Smoother fibre-reinforced with natural, eco-friendly and nontoxic micro-fibres (250 µm).
- Thermal features and high vapour permeability thanks to the micro-porous structure of natural fillers and air binders.
- In combination with *Diathonite Acoustix* and/or *Diathonite Acoustix*$^+$ plasters, it guarantees excellent thermo-hygrometric comfort and high sound-absorbing performance.
- It avoids moulds formation thanks to the antibacterial properties of the lime.
- Excellent workability during the application.
- It can be applied with a thickness from 2 mm to a maximum of 5 mm.

YIELD

0.7 ± 10% kg/m^2 per mm of thickness.

On *Diathonite Acoustix* and/or *Diathonite Acoustix*$^+$ yield is 2.1 ± 10% kg/m^2 for 3 mm of thickness.

COLOUR

White.

PACKAGING

15 kg paper bag.

APPLICATION FIELDS

Acoustic finishing smoother to be applied on top of acoustic materials, such as the cork-based plasters *Diathonite Acoustix* and *Diathonite Acoustix*$^+$ (see technical data sheets).

STORAGE

Store the product in its original containers and in dry places, away from sunlight water and ice, at temperatures higher than +5°C (+41°F). Storage time: 12 months.

EPD® THE INTERNATIONAL EPD® SYSTEM

CONTRIBUTES TO LEED®

CE EN 998-1

DIASEN GREEN BUILDING FUTURE

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PREPARATION OF THE SUPPORT

The substrate must be completely hardened and resistant enough. The surface must be thoroughly clean, well consolidated, without debris or detaching parts.

Diathonite line plasters or new plasters

It does not need primer, the application can directly be performed on the support, previously we.

MIXING

According to the water absorption degree of the support and to environmental conditions, it is recommended to dose the right amount of water that is necessary to obtain the correct adhesion.
The specified amount of water is indicative.

- Add about 45 - 55% clean water, about 6.7 - 8.3 L per bag of *Argatherm Acoustix* (15 kg). Mix with a mixing drill or automatic kneader until the product is homogeneous, free of lumps and well hydrated.
- The mixture should be left to stand for 5 minutes. After that, mix again and use.
- Never add extraneous products to the mixture.

APPLICATION

Hand application

1. It is **fundamental** to wet the support, in particular during summer season. If the surface was treated with a primer, there is no need to wet the support.
2. Apply *Argatherm Acoustix* by steel spatula with rounded edges in two crossed coats, until reaching an indicative thickness of 1.0 – 1.5 mm per layer.
3. The first coat has the function of filling substrate porosity.
4. The second layer must be applied when the previous one is compact to the touch (after about 12/24 hours at 23°C / 73°F and 50% relative humidity), until reaching the expected thickness.
5. Wet the smoother before the application of the second layer.
6. When the applied smoothing layer is still moist, finish with plastic trowel, according to what type of smoothing is to be realized.

Application with Plastering Machine

Argatherm Acoustix can be applied using plastering machines. The settings may vary depending on the chosen machine. It is possible to use three-phase rendering machines (such as PFT G4) equipped with a new D6-3 rotor and stator, a perforated full-blade mixer (semi-closed), and a conical material delivery hose with a diameter of 35/25 mm, fitted with a 14 or 16 mm nozzle..

1. It is essential to wet the substrate, especially during the summer months and on masonry exposed to direct sunlight.
2. Load the contents of the bags into the hopper and set the machine's flowmeter to **300 l/h** to ensure optimal consistency for adhesion.
3. Spray the product from the bottom upwards, applying a first layer of *Argatherm Acoustix* to achieve a thickness of approximately 1.0 – 1.5 mm per coat.
4. The first coat serves to fill the porosity of the substrate.
5. The second coat should be applied when the underlying layer feels firm to the touch (after approximately 12–24 hours at 23°C and 50% relative humidity), until the required thickness is achieved.
6. Wet the surface before applying the second coat.
7. When the applied coat is still moist, finish with a sponge or plastic float, depending on the desired finish.

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DRYING TIME

At a temperature of 23°C / 73°F and 50% relative humidity, the product dries in 5 - 7 days.

- Drying time is influenced by environmental relative humidity and by temperature and it may significantly change.
- Within 24 hours from the application, temperatures lower than + 5°C/ 41°F and higher than +30°C/ 86°F, can change the drying time and can affect mechanical performances of the smoother.
- If applied in higher quantities than expected, drying times could significantly increase.

SUGGESTIONS

- Do not apply at environmental temperature and at support temperature lower than +5°C (+41°F) and higher than +30°C (+86°F).
- Apply *Argatherm Acoustix* at least 15 days after the last layer of *Diathonite Acoustix* and/or *Diathonite Acoustix*$^{+}$.
- Do not apply over painted substrates or treated with waterproofing, over gypsum or scagliola-gypsum, on wood, metal or plastic supports and over plasters that are not from *Diathonite* line of materials.
- Before applying *Argatherm Acoustix*, it is recommended to cover doorsteps, window fixtures and each element that will not be coated.

CLEANING

Wash tools with water before the product hardens.

SAFETY

While handling, always respect the instructions described in safety data sheet. Always use protective gloves and anti-dust mask.

* These data even if carried out according to regulated tests, are indicative and they may change when specific building site conditions vary.

Technical Data*

Features		Unit
Yield	0.7 ± 10% kg/m^2 for mm of thickness On *Diathonite Acoustix* and/or *Diathonite Acoustix*$^{+}$ 2.1 ± 10% kg/m^2 for 3 mm thickness	kg/m^2
Aspect	Premixed powder	-
Colour	white	-
Density	650 ± 10%	kg/m^3
Grain size	0 – 0,6	mm
W/c ratio	0.45 – 0.55 L/kg 6.7 – 8.3 L for each bag (15 kg)	L/kg
Minimum thickness	2.0 (0.08 inch)	mm
Minimum thickness per layer	1.0 – 1.5 (0.04-0.06 inches)	
Maximum total thickness	5.0 (0.19 inches)	

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Application temperature	+5 /+30	°C
	+41/+86	°F
Resting time of the mixture before application	5	min
Drying time (T=23°C; U.R. 50%)	5 - 7	days
Storage	12 in original package and in dry place	months
Packaging	15 kg paper bags	kg

Final performances	Result	Unit	Regulation	Result
Thermal conductivity (λ)	≤ 0.2	W/mK	UNI EN 12667	T2 category
Vapour permeability coefficient	μ ≤ 15	-	UNI EN 1015-19	-
Capillary water absorption coefficient (C_m)	-	-	UNI EN 1015-18	W0 category
Apparent density of hardened mortar	790 ± 10%	kg/m^3	UNI EN 1015-10	-
Apparent density of fresh mortar	850 ± 10%	kg/m^3	UNI EN 1015-6	class CS IV class R2
Average compressive strength *after 28 days*	≥ 15	N/mm^2	UNI EN 1015-11 UNI EN 1504-3	
Fire reaction	class A1	-	UNI EN 13501-1	T2 category

ACOUSTIC PERFORMANCES		Unit	Regulation	Result
Noise Reduction Coefficient (**NRC**) *Diathonite Acoustix* (thickness: 3 cm) + *Argatherm Acoustix* (thickness: 3 mm)	0.50	-	UNI EN ISO 10534-2 ASTM C423	-

Frequency (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250
α_S	0.56	0.64	0.77	0.65	0.42	0.50	0.50	0.53	0.54	0.52	0.43	0.36
α_p	0.65			0.50			0.50			0.45		

Frequency (Hz)	1600	2000	2500	3150	4000	5000
α_S	0.43	0.42	0.40	0.42	0.50	0.46
α_p	0.40			0.45		

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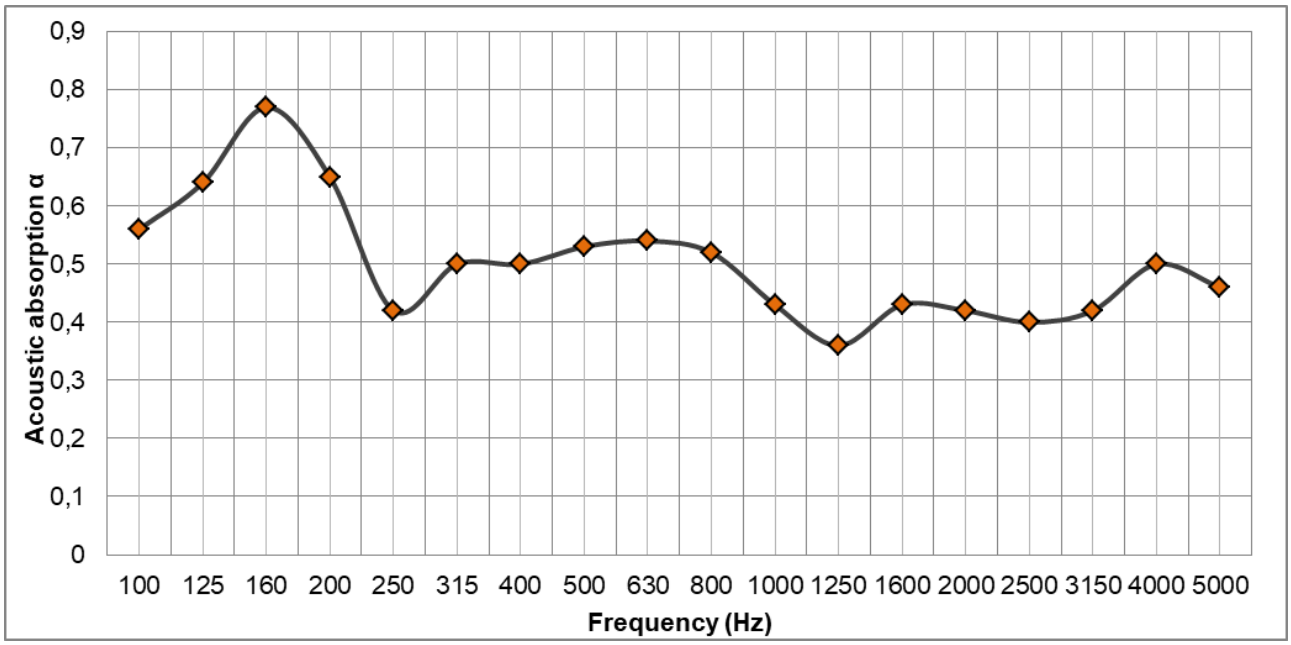

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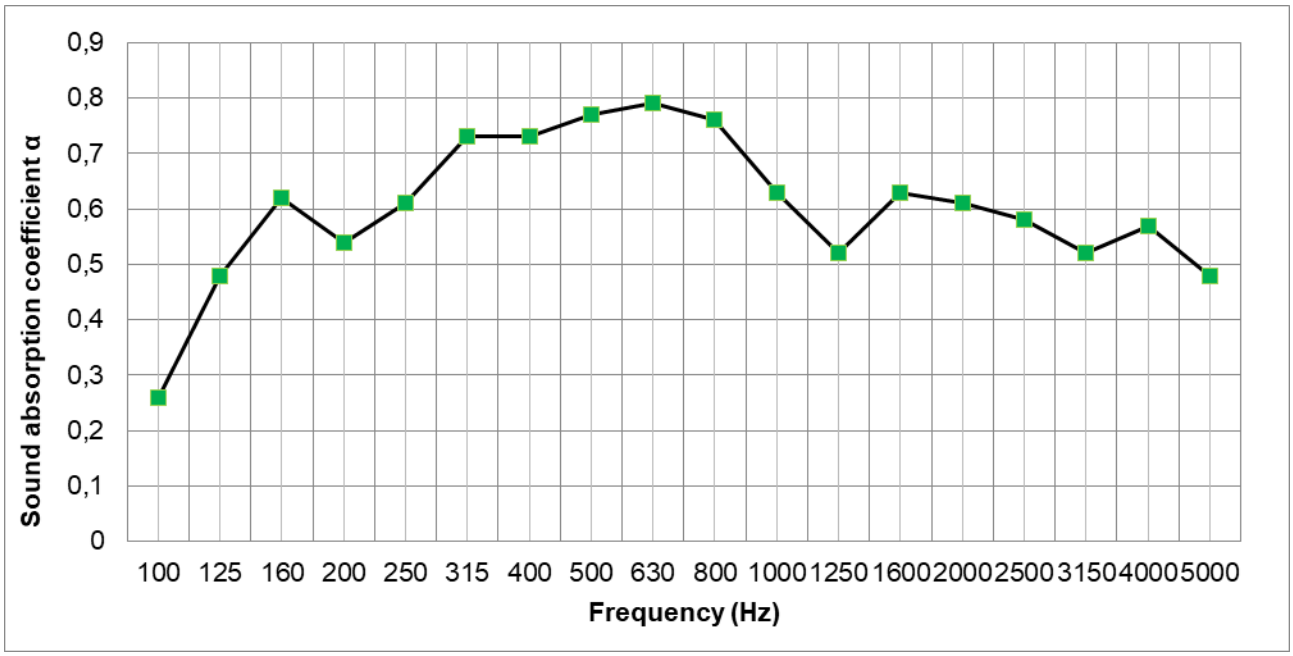
ACOUSTIC PERFORMANCES		Unit	Regulation	Result
Noise Reduction Coefficient (**NRC**) *Diathonite Acoustix*⁺ (thickness: 3 cm) + *Argatherm Acoustix* (thickness: 3 mm)	0.65	-	UNI EN ISO 10534-2 ASTM C423	-

Frequency (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250
α_S	0.26	0.48	0.62	0.54	0.61	0.73	0.73	0.77	0.79	0.76	0.63	0.52
α_p	0.45			0.65			0.75			0.65		

Frequency (Hz)	1600	2000	2500	3150	4000	5000
α_S	0.63	0.61	0.58	0.52	0.57	0.48
α_p	0.60			0.55		



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