



ISOLCAP

lightweight thermal insulating
ready to use base screeds and screeds



The first really
lightweight
and CE marked
SCREED



THERMAL

Insulation & Chemicals Division

THERMAL INSULATION . REFURBISHMENT AND DEHUMIDIFICATION

LIGHTWEIGHT AND THERMAL INSULATING BASE SCREEDS

ISOLCAP LIGHT 110

Ready to use, superlight thermal insulating base screed.

Bag: 70 L yield / Yield: 1 m² at 7 cm thickness

Beads: fine grain size Ø 2 mm

Binder: pre-batched at 110 kg/m³

Pallet: 40 bags 70 L/each = 2,8 - 3,0 m³ yield [*]

Walkable: after 72 hours.

[*] According to the mixing method.



$\lambda_D =$
0,043
W/mK



ISOLCAP 250

Ready to use, lightweight thermal insulating base screed.

Bag: 70 L yield / Yield: 1 m² at 7 cm thickness

Beads: grain size in curve Ø 3 - 6 mm

Binder: pre-batched at 250 kg/m³

Pallet: 40 bags 70 L/each = 2,8 - 3,0 m³ yield [*]

Walkable: after 24 hours.

[*] According to the mixing method.



$\lambda_D =$
0,067
W/mK



ISOLCAP FEIN 300

Ready to use, lightweight thermal insulating base screed with fine EPS beads, suitable also for single-layer screed (direct application of the flooring).

Bag: 70 L yield / Yield: 1 m² at 7 cm thickness

Beads: fine grain size Ø 2 mm

Binder: pre-batched at 300 kg/m³

Pallet: 40 bags 70 L/each = 2,8 - 3,0 m³ yield [*]

Curing time before laying (**):

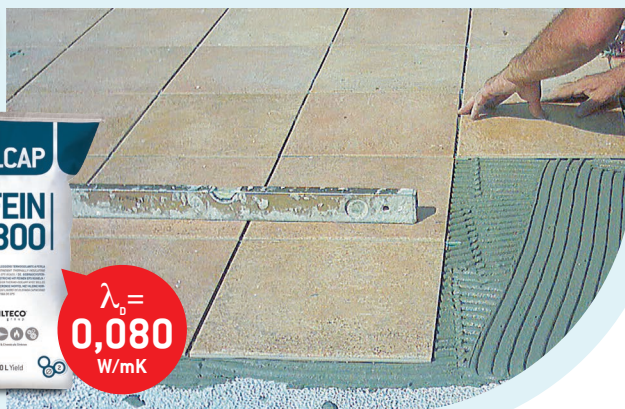
- ceramic tiles, stone or marble flooring: after 96 hours;
- floating wooden floor: after 7 days.

[*] According to the mixing method.

[**] Indication for 5 cm base screed and always according to the specific environmental conditions.



$\lambda_D =$
0,080
W/mK



ISOLCAP SPEED 525

Ready to use, thermal insulating base screed.

Quick drying, improved strength, high compact surface.

Bag: 70 L yield / Yield: 1 m² at 7 cm thickness

Beads: fine grain size Ø 2 mm

Quick drying binder and granular particles: pre-batched at 525 kg/m³

Pallet: 40 bags 70 L/each = 2,8 - 3,0 m³ yield [*]

Curing time before laying (**):

- ceramic tiles, stone or marble flooring: after 24 hours;
- floating wooden floor: after 48 hours.

[*] According to the mixing method.

[**] Indication for 5 cm base screed and always according to the specific environmental conditions.



$\lambda_D =$
0,095
W/mK



ISOLCAP XX 500

Ready to use, lightweight thermal insulating base screed reinforced with fibres.

High mechanical strength and high dimensional stability.

Bag: 70 L yield / Yield: 1 m² at 7 cm thickness

Beads: fine grain size Ø 2 mm

Binder and granular particles: pre-batched at 500 kg/m³

Pallet: 40 bags 70 L/each = 2,8 - 3,0 m³ yield [*]

Curing time before laying [**]:

- ceramic tiles, stone or marble flooring: after 5 days;
- floating wooden floor: after 10 days.

[*] According to the mixing method.

[**] Indication for 5 cm base screed and always according to the specific environmental conditions.



$\lambda_D =$
0,104
W/mK

LIGHTWEIGHT AND THERMAL INSULATING SCREEDS

ISOLCAP MAX 800

Ready to use, thermal insulating screed.

Bag: 50 L yield / Yield: 1 m² at 5 cm thickness

Beads: fine grain size Ø 2 mm

Binder and granular particles: prebatched at 800 kg/m³

Pallet: 40 bags 50 L/each = 2,0 m³ yield [*]

Curing time before laying [**]:

- ceramic tiles, stone or marble flooring: after 6 days;
- floating wooden floor: after 12 days.

[*] According to the mixing method.

[**] Indication for 5 cm screed and always according to the specific environmental conditions.



$\lambda_D =$
0,176
W/mK

News
CE

NEW ISOLCAP "MINI"

LESS WEIGHT / LESS TIME / LESS EFFORT

Ideal for:

- ✓ flat interventions
- ✓ interventions of small / medium quantity
- ✓ historic centre interventions
- ✓ "do-it-yourself"
- ✓ hard handling



News
Isolcap
Mixer 50

CEMENTITIOUS SCREEDS

KRONOS

Ready to use mortar suitable for the production of quick drying screeds with controlled shrinkage.

Bag: 30 kg

Specific weight of the powder: approx. 1570 kg/m³

Thermal conductivity λ : 1,35 W/mK

Compressive strength (28 days): ≥ 25 N/mm²

Flexural strength (28 days): ≥ 5 N/mm²

Yield per 1 cm thickness: approx. 17 kg/m².

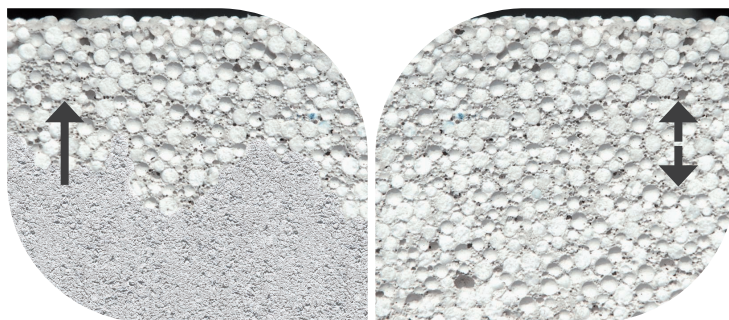


ISOLCAP READY TO USE MORTARS

ADVANTAGES

ISOLCAP Ready to use mortars:

- Guarantee consistency and homogeneity of the dosages and of the thermal and mechanical characteristics.
- Do not shrink during the application or curing phase.
- Provide total dimensional stability of the mix over time. The screeds do not crack nor swell.
- The mixes can be pumped over long distances without causing any change in their physical or mechanical characteristics.
- Are lightweight, easy to apply and to transport.
- Are pH-controlled and non-corrosive, hence the mixes do not trigger reactions of any kind with the materials with which they come into contact.
- Are suitable to meet insulating performances required by the current standards.



MIXTURE WITH POLYSTYRENE NOT CORRECTLY MIXED
Non homogeneous distribution into the mix (bead flotation phenomenon).

MIXTURE WITH ISOLCAP RANGE PRODUCTS
Homogeneous distribution into the mix.

MAIN TECHNICAL DATA

PRODUCT > TECHNICAL DATA	ISOLCAP LIGHT 110	ISOLCAP 250	ISOLCAP FEIN 300	ISOLCAP SPEED 525	ISOLCAP XX 500	ISOLCAP MAX 650	ISOLCAP MAX 800	KRONOS
Dry density kg/m ³	110	250	300	525	500	650	800	1570
Volumetric mass (dry mortar) kg/m ³ approx.	130	265	315	540	515	750	815	n.d.
Use	Base Screed	Base Screed	Base Screed	Base Screed	Base Screed	Screed Base Screed	Screed Base Screed	Screed
Thermal conductivity λ_0 W/mK (*)	0,043	0,067	0,080	0,095	0,104	0,149	0,176	1,35
Compressive strength 28 days N/mm ²	0,528	0,83	1,61	1,7	2,24	≥ 5,0	≥ 5,0	≥ 25
Flexural strength 28 days N/mm ²	0,12	0,46	0,95	2,4	0,78	≥ 1,0	≥ 1,0	≥ 5
Permeability to water vapour μ	5,1	6,9	7,2	10,2	10,2	14,0	14,0	n.d.
Moisture resistance	rotproof							n.d.
Specific heat J/kgK	1000 **	1000 **	1000 **	1000 **	1000 **	1000 **	1000 **	1000 **

(*) Conversion factor determining the value of the project [23°C, 80% R.H.]: + 13,3%. / (**) 1000 J/kgK = 0,24 kcal/kgK

DETERMINATION OF THE THERMAL RESISTANCE "R" AND THERMAL TRANSMITTANCE "U" VALUES *

According to the application thickness (lightweight screeds and base screeds)

PRODUCTS	THERMAL CONDUCTIVITY λ_0 W/mK	COEFFICIENT	THICKNESS cm								
			4	5	6	7	8	9	10	15	20
ISOLCAP LIGHT 110	0,043	R m ² k/W = (thickness mt/ λ)	0,93	1,16	1,40	1,63	1,86	2,09	2,33	3,49	4,65
ISOLCAP 250	0,067		0,60	0,75	0,90	1,04	1,19	1,34	1,49	2,24	2,99
ISOLCAP FEIN 300	0,080		0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,88	2,50
ISOLCAP SPEED 525	0,095		0,42	0,53	0,63	0,74	0,84	0,95	1,05	1,58	2,11
ISOLCAP XX 500	0,104		0,38	0,48	0,58	0,67	0,77	0,87	0,96	1,44	1,92
ISOLCAP MAX 650	0,149		0,27	0,34	0,40	0,47	0,54	0,60	0,67	1,01	1,34
ISOLCAP MAX 800	0,176		0,23	0,28	0,34	0,40	0,45	0,51	0,57	0,85	1,14

PRODUCTS	THERMAL CONDUCTIVITY λ_0 W/mK	COEFFICIENT	THICKNESS cm								
			4	5	6	7	8	9	10	15	20
ISOLCAP LIGHT 110	0,043	U W/m ² K = 1/R	1,07	0,86	0,71	0,61	0,54	0,48	0,43	0,29	0,22
ISOLCAP 250	0,067		1,68	1,34	1,12	0,96	0,84	0,74	0,67	0,45	0,34
ISOLCAP FEIN 300	0,080		2,00	1,60	1,33	1,14	1,00	0,89	0,80	0,53	0,40
ISOLCAP SPEED 525	0,095		2,38	1,90	1,58	1,36	1,19	1,06	0,95	0,63	0,48
ISOLCAP XX 500	0,104		2,60	2,08	1,73	1,49	1,30	1,16	1,04	0,69	0,52
ISOLCAP MAX 650	0,149		3,73	2,98	2,48	2,13	1,86	1,66	1,49	0,99	0,75
ISOLCAP MAX 800	0,176		4,40	3,52	2,93	2,51	2,20	1,96	1,76	1,17	0,88

(*) Ref. λ_0



ISOLCAP MAIN APPLICATION FIELDS

Internal and external.



INTERMEDIATE LAYER / FILLING

(on floor and/or basements):

- Surface levelling. **1**
- Beneath sand and cement screeds. **2**
- Beneath self-levelling screeds. **2**
- Beneath underfloor heating system (also with the direct application of radiant pipes). **3**
- Vaulted or waffle floor levelling. **4**
- Beneath industrial flooring.
- Beneath driveable asphalt.
- Cavity wall insulation. **5**

BUILDING ELEMENTS

- Blocks. **6**
- Prefabricated wall panels. **7**

SINGLE-LAYER SCREEDS

(on floor and/or basements) direct application of:

- Ceramic tiles, stone or marble flooring and laying parquet floors. **8**
- Parquet floors, after applying a thin-bed compound. **2**
- Flexible flooring, after application of thin-bed levelling compound. **2**

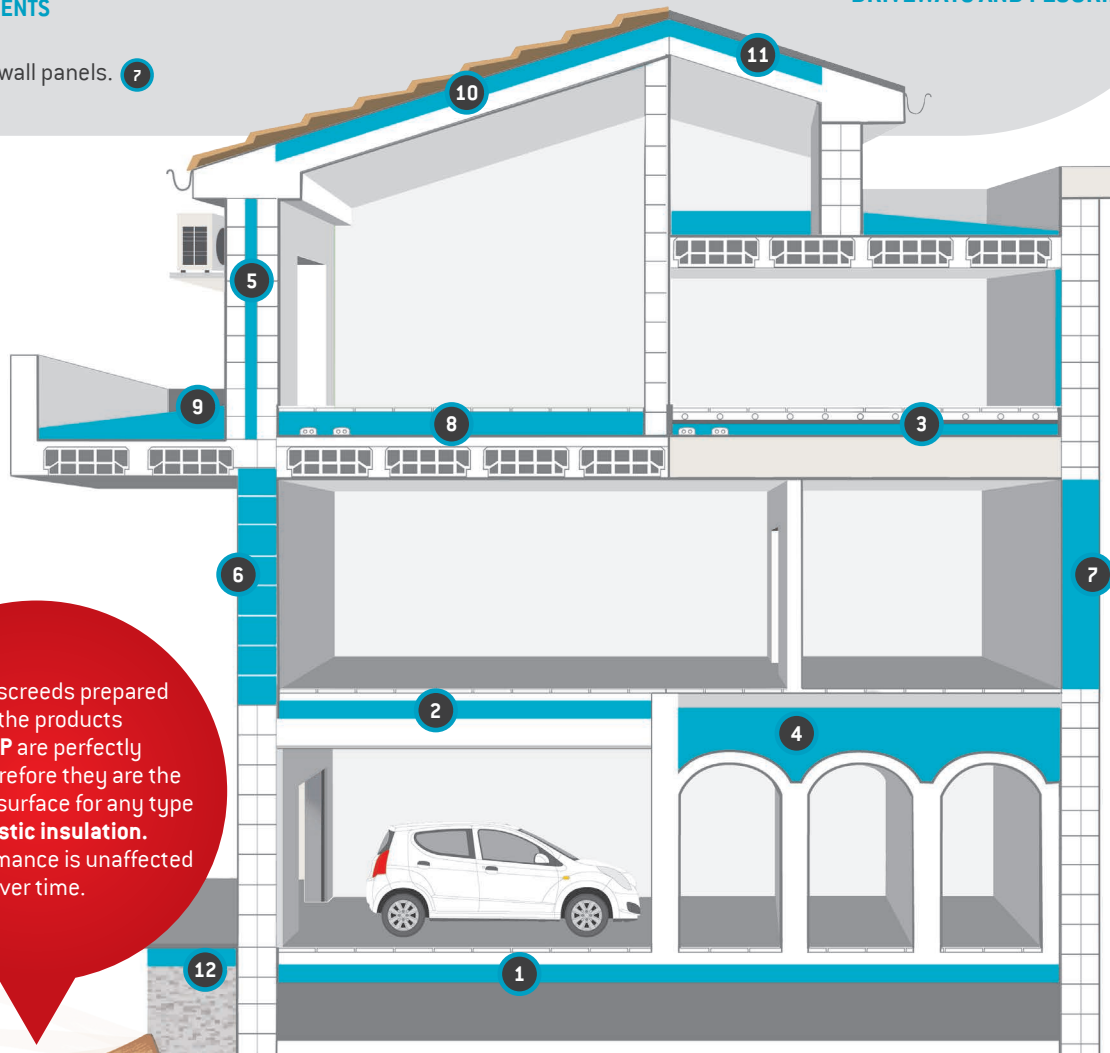
And also:

- Gradient formation on terraces. **9**

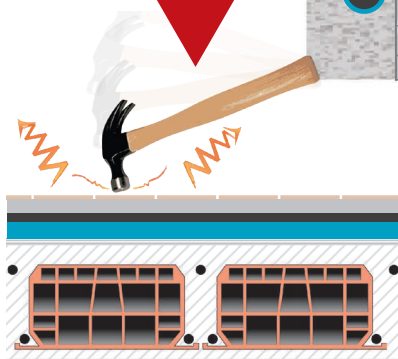
ROOFING

- Pitched roofs. **10**
- Flat roofs with or without falls.
- Vaulted roofs.
- Corrugated steel sheet.
- Asbestos fibre cement [encapsulation].
- Direct application of waterproofing membranes. **11**

BENEATH ASPHALT DRIVEWAYS AND FLOORING **12**



The base screeds prepared with the products ISOLCAP are perfectly stable. Therefore they are the ideal laying surface for any type of **acoustic insulation**. Their performance is unaffected over time.



Laying of acoustic mats



Impact sound measurement

SYNOPSIS TABLE OF THE APPLICATIONS

LIGHTWEIGHT BASE SCREEDS AND SCREEDS

INTERMEDIATE LAYER / FILLING / SURFACE LEVELLING:	ISOLCAP LIGHT 110	ISOLCAP 250	ISOLCAP FEIN 300	ISOLCAP SPEED 525**	ISOLCAP XX 500	ISOLCAP MAX 650	ISOLCAP MAX 800
Surface levelling	yes	yes	yes	yes	yes	yes	yes
Beneath sand and cement screeds	yes	yes	yes	yes	yes	yes	yes
Vaulted floor levelling	yes	yes	yes	yes	yes	yes	yes
Beneath self-levelling screeds	yes	yes	yes	yes	yes	yes	yes
For underfloor heating system	yes	yes	yes	yes	yes	yes	yes
Beneath industrial floor	no	no	yes	yes	yes	yes	yes
Beneath asphalt driveways mantles	no	no	yes	yes	yes	yes	yes
ROOFING:	ISOLCAP LIGHT 110	ISOLCAP 250	ISOLCAP FEIN 300	ISOLCAP SPEED 525**	ISOLCAP XX 500	ISOLCAP MAX 650	ISOLCAP MAX 800
Pitched roofs	yes*	yes	yes	yes	yes	yes	yes
Flat roofs without falls	yes*	yes	yes	yes	yes	yes	yes
Flat roofs with falls	yes*	yes	yes	yes	yes	yes	yes
Vaulted roofs	yes*	yes	yes	yes	yes	yes	yes
In corrugated steel	yes*	yes	yes	yes	yes	yes	yes
Asbestos fibre cement encapsulation	no	yes	yes	yes	yes	yes	yes
"PIANO ZERO" FOR DIRECT APPLICATION OF FLOOR COVERING:	ISOLCAP LIGHT 110	ISOLCAP 250	ISOLCAP FEIN 300	ISOLCAP SPEED 525**	ISOLCAP XX 500	ISOLCAP MAX 650	ISOLCAP MAX 800
Single layer for ceramic, gres, clinker	no	no	yes	yes	yes	yes	yes
Smoothing mortar for parquet	no	no	yes	yes	yes	yes	yes
Layer for linoleum	no	no	yes	yes	yes	yes	yes

[*] Warning: not suitable for the direct application of waterproofing layers. [**] Isolcap Speed 525 is a quick drying product and for this reason it must always be used within maximum 15 minutes from the mixing time, taking into consideration in any case the climatic conditions, like temperature and air humidity (see also technical data sheet). Please do not hesitate to contact Edilteco Technical Department for any kind of information.

BENEFITS

LOW ENVIRONMENTAL IMPACT *

- Better thermal insulation.
- Lower fuel consumption during the transport due to its low weight.
- Higher thermal insulation value: lower volumes at equal thermal performances.
- Several production centres in Italy.

LOW DENSITY

- Less weight and load on structures.

DUCTILITY

- Less water required during the preparation.
- Less water absorbed during the mixing.
- Easy to mix and pump.
- Easy and fast application.
- Easy transportation (lightweight).

SAFE HOME

- It improves the structural resistance of the building in case of earthquakes.
- Fire resistance: A2-s1,d0 (starting from 200 kg/m³).

PRODUCT WITH LOW environmental impact

little energy used in production and transportation, a lot of energy saved, thanks to its thermal performances! *



MEANS OF APPLICATION

LIGHTWEIGHT BASE SCREEDS AND SCREEDS

IT CAN BE MIXED WITH:	ISOLCAP LIGHT 110	ISOLCAP 250	ISOLCAP FEIN 300	ISOLCAP SPEED 525*	ISOLCAP XX 500	ISOLCAP MAX 650	ISOLCAP MAX 800
Drill mixer	yes	yes	yes	yes	yes	yes	yes
Concrete mixer	yes	yes	yes	yes	yes	yes	yes
Horizontal mixing machine e.g. "Turbomalt"	yes	yes	yes	yes	yes	yes	yes
IT CAN BE MIXED AND PUMPED AT THE LAYING SURFACE WITH:	ISOLCAP LIGHT 110	ISOLCAP 250	ISOLCAP FEIN 300	ISOLCAP SPEED 525*	ISOLCAP XX 500	ISOLCAP MAX 800	ISOLCAP "MINI"
Isolcap Machine (see equipments)	yes	yes	yes	no	yes**	yes**	yes**
Politerm® Machine (see equipments)	yes	yes	yes	no	yes**	yes**	yes**
Plastering machine	yes***	no	yes	yes	yes	yes	yes
Pump for bases e.g. "Turbosol"	no	yes	yes	no	yes	yes	yes
Truck mixer and concrete pumps	no	yes	yes	no	yes	yes	yes
220 V single-phase equipment	yes	no	yes	yes	yes	yes	yes
New! Isolcap Mixer 50	no	no	no	no	no	no	yes

[*] Isolcap Speed 525 is a quick drying product and for this reason it must be always used within maximum 15 minutes from the mixing time, taking into consideration in any case the climatic conditions, like temperature and air humidity (see also technical data sheet). [**] The pumping of Isolcap XX 500, Isolcap Max 650 and Isolcap Max 800 with the Politerm® Machine will cause faster consumption of the stator. [***] Single-phase or three-phase plastering machine correctly equipped. In this case Edilteco Technical Department must be consulted.

SPECIFIC EQUIPMENT

ISOLCAP RANGE

POLITERM® MACHINE 1000 ECO

Entirely stainless steel equipment for the mixing and pumping of screeds and lightweight screeds composed of fine-grain materials such as virgin expanded polystyrene beads, recycled expanded polystyrene beads, perlite, vermiculite and cork, also mixed with cellular foam produced by specific equipment. The maximum length of the pipe for carrying the mortar is of 100 m with a maximum height of 30 m.

Electrical power supply: 400 V - 50 Hz.

Also available with diesel fuel: homologated diesel engine in accordance with the regulation of noise pollution.

Available with tank:

· from 1 m³



* It is also available in the following version:

POLITERM® MACHINE 1000 H2O

Equipped with automatic water dosage system. For the setting up, please consult the technical data sheet.



POLITERM® MACHINE SCREW

Equipment for the mechanical addition of cement in Politerm® Machine tank.

Electrical power supply: 400 V.

Customized fittings available on request.



ISOLCAP MIXER 50

Compact mixer, lightweight and silent.

Ideal to be used in small building sites and for refurbishment works.

Tank capacity: 56 L.

Electrical power supply: 230 V.



SINGLE-DISC SANDER

Equipment for the surface smoothing of lightweight thermal insulating base screeds and screeds.

Electrical power supply: 230 V.

Ideal for the surface smoothing of lightweight and thermal insulating single-layer base screeds and screeds (Piano Zero system).



ISOLCAP MACHINE H2O

Entirely stainless steel equipment for the mixing and pumping of screeds and lightweight screeds (in particular the Isolcap range products) composed of fine-grain materials like virgin expanded polystyrene beads, recycled expanded polystyrene beads, perlite, vermiculite, cork and self-levelling mortars (both cement or anydrite based).

Weight: 320 kg. *Capacity tank:* 220 L.

Electrical power supply: 2,2 kw - 400 V.

Maximum length of the pipe for carrying the mortar: 30 m with a maximum height of 15 m.

Equipped with automatic water dosage system.



** It is also available in the following version: **

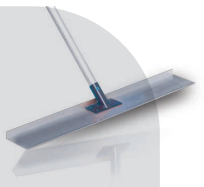
ISOLCAP MACHINE HE H2O

For the setting up, please consult the technical data sheet.



LEVELLING TOOL

Aluminium straight edge with handle for the spreading of lightweight screeds on the laying surface.



COMPLEMENTARY PRODUCTS

EDILSTIK

Synthetic latex to improve the properties of the cement mortars. To be used in the laying of single-layer lightweight screeds (Piano Zero system) to promote the adhesion to the receiving surface and for the preparation of very thin smoothing screeds (1 - 2 mm) for surfaces protection.



EDILSTIK F.C.A.

Pigmented synthetic latex for temporary stabilization of asbestos fibre cement sheets ("type D" certificate).

Packaging: Tank 5 kg / Tank 20 kg / Tanks on pallet 1000 kg.



PIANO ZERO PROFILES

PVC guide rails for setting accurate levelling of the base screed. They are particularly suitable for single-layer lightweight screeds. The special cross-section design allows them to be securely fixed and held within the screed. They are very stable providing excellent alignment and preventing the formation of thermal bridges.



AUTOLIV Smoothing base screed

Ready to use self-levelling mineral mortar in powder, for manual or mechanical application. It is suitable for the high resistant levelling of base screeds prepared with Politerm® Blu and Isolcap (consult Edilteco application manual), before the application of ceramic tiles, porcelain, marble, natural stone and parquet.



EDILTECO, AN INTERNATIONAL SUCCESS

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LEGEND

- Edilteco Group
- Partners
- Distributors



360° Insulation

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