Dossier Product

Vers. 0/2020

LAPITEC

INDEX


arabescato
perla
arabescato
michelangelo

1. LAPITEC PRODUCT

1.1/ CHARACTERISTICS

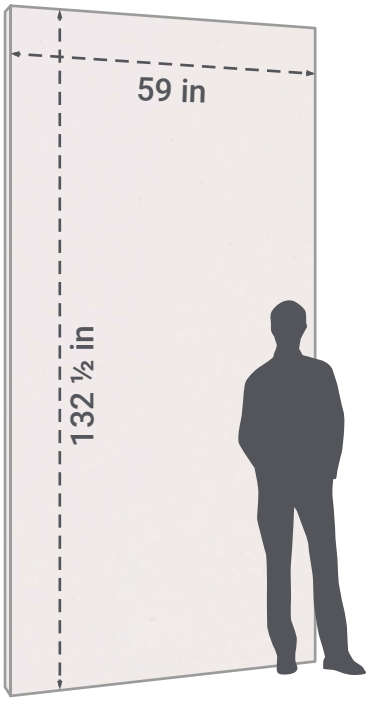
Lapitec® is a sintered stone, an innovative material manufactured in large size sheet form using an exclusive patented technology and it can be used both indoors and outdoors.

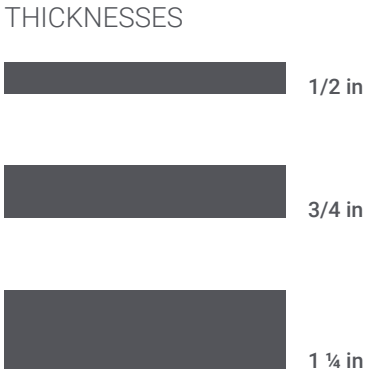
Lapitec® sintered stone is resistant to wear, atmospheric agents, exposure to sunlight (UV), heat, frost and absorption.

The various **Lapitec®** surface finishes make it suitable for use both for floors and for walls.

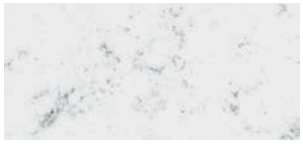
Lapitec® is compatible with a wide range of adhesives and fastenings that allow installation of various types of supports. It can be used without limitations in different environments, even particularly severe ones (damp environments, saline atmospheres, in the presence of aggressive pollutants, etc.).

Standard dimensions





1.2/ THE LAPITEC RANGE


ARABESCATO MICHELANGELO


ARABESCATO PERLA

ARABESCATO CORALLO

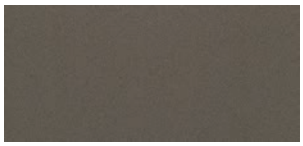
BIANCO ASSOLUTO

ARTICO

BIANCO POLARE

BIANCO CREMA


AVANA

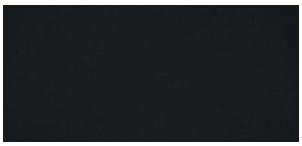

MOCA


EBANO


GRIGIO CEMENTO


GRIGIO PIOMBO


NERO ANTRACITE


NERO ASSOLUTO

BIANCO AURORA

BIANCO ELETTRA

BIANCO VITTORIA

FOSSIL

A large grain surface finish, with roughness similar to split stone or the mottled surfaces of natural stone.

ARENA

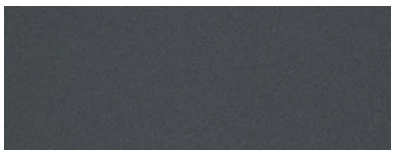
A smooth and sanded finish, with a regular grain that gives a natural vitality to the entire sheet.

DUNE

Reminiscent of desert sand, where the wind delicately shapes the landscape.

VESUVIO

A structured finish which is soft to the touch - similar to the smooth (Leather) finish attained on granite.



LITHOS

A finely wrinkled surface, excellent for kitchen countertops, outdoor walkways on yachts and pools.

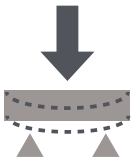
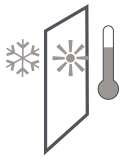
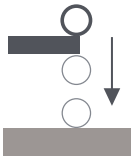
SATIN

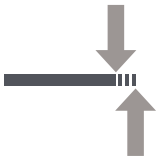
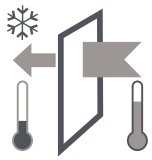
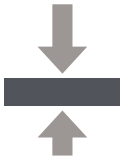
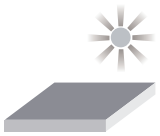
A silky shine with imperceptible roughness.

LUX

A highly reflective glossy finish.

1.3/ TECHNICAL DATA SHEET

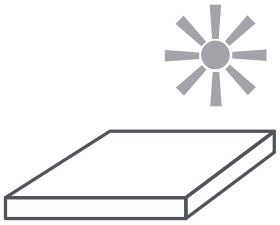
TECHNICAL SPECIFICATIONS		STANDARD	VALUE
	Standard dimensions	EN 14617-16	132 1/2 x 59 1/16 in (1/2-3/4 in) 132 1/2 x 57 1/2 in (1 1/4 in)
	Thickness	EN 14617-16	1/2 - 3/4 - 1 1/4 in
	Absolute Weight	EN 14617-1	149 lb/ft3
	Water absorption	EN 14617-1	0.02%
	Flexural strength (R_{tf}) post 25 frost/thaw cycles (R_{Mf}) post 20 cycles of thermal shock (R_{sf})	EN 14617-2	7977 lbf/in2 7847 lbf/in2 7876 lbf/in2
	Deep abrasion resistance	EN 14617-4	1 in3
	Frost resistance	EN 14617-5	Resistant
	Thermal shock resistance coefficient (post 20 cycles)	EN 14617-6	0.9%
	Impact resistance	EN 14617-9	1.97 Joules (1/2 in thick) 3.3 Joules (3/4 in thick)
	Resistance to acids and bases	EN 14617-10	C4 - Resistant
	Linear thermal expansion coefficient	EN 14617-11	5.8 x 10^{-6} $°C^{-1}$

TECHNICAL SPECIFICATIONS		STANDARD	VALUE
	Dimensional stability	EN 14617-12	A
	Fire resistance	EN 13501-1	A1
	Thermal conductivity	EN ISO 10456	1,3 W /m · °K
	Specific heat	EN ISO 10456	840 J/kgK
	Water vapor diffusion resistance	EN ISO 10456	no value (dry) ∞ (wet)
	Non-slip properties	DIN 51130	R10 (Vesuvio, Lithos, Dune) R13 (Fossil, Arena)
	Compression strength	ASTM C170	2506 lbf/in2 (dry) 2759 lbf/in2 (wet)
	Color light fastness	DIN 51094	No variation
	Capillary water absorption	EN 1925	0,0002 oz/in2s0,5

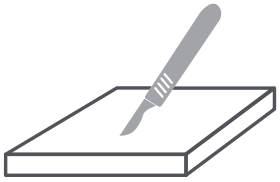
Lapitec® is fire resistant material, classified A1. When exposed to fire it does not ignite, does not release fumes and does not spread the flame.

Violent thermal shock such as the direct exposure to a flame may cause the material to break.

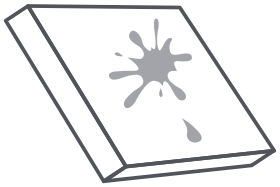
1.4/ PLUS LAPITEC



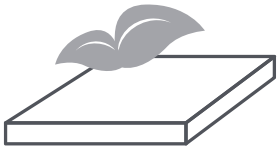
Not sensitive to UV rays
Does not fade



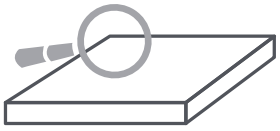
Highly scratch resistant



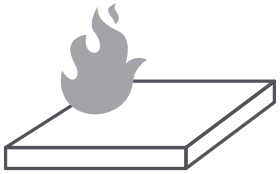
Non porous and
stain resistant



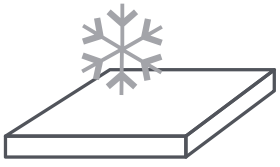
100% natural



Antibacterial



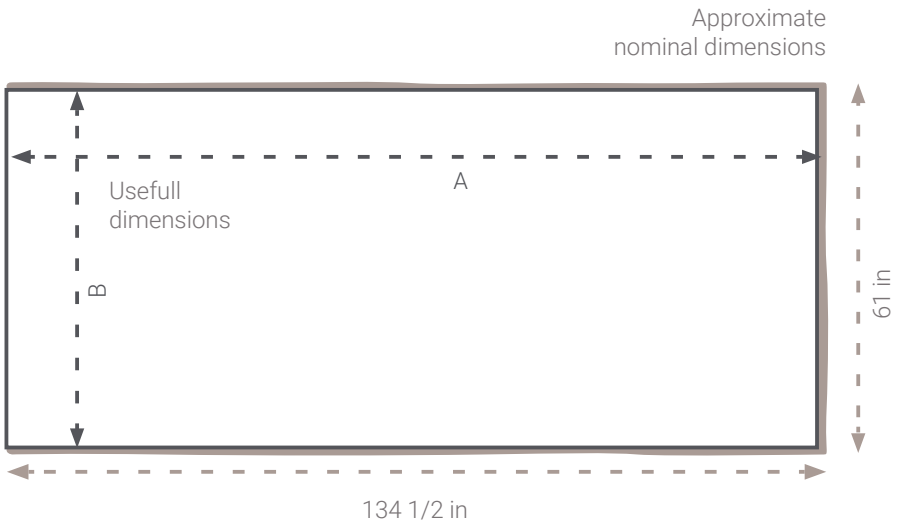
Resistant to high
temperatures



Resistant to low
temperatures

Resistant to acids
and alkali

1.5/ DIMENSIONS



Dimensions	Value	Length in inches	Width in inches
Nominal	Approximate	134	61
Effective for 1/2 in	Minimum guaranteed	132 1/2 (A)	59 (B)
Effective for 3/4 in	Minimum guaranteed	132 1/2 (A)	59 (B)
Effective for 1 ¼ in	Minimum guaranteed	132 1/2 (A)	57 1/2 (B)

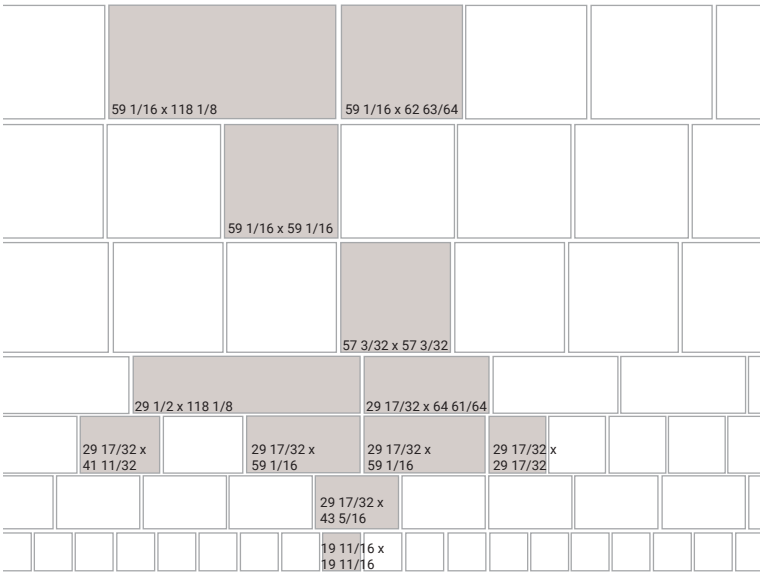
Note: the useful area for the Lithos finish is 132 1/2 x 53 1/8, with 48,86 ft2 of surface.

Technical information	UoM	1/2 in	3/4 in	1 1/4 in
Slab surface	ft2	54,35	54,35	52,85
Slab weight	lb	353	573	816
Weight per m²	lb	6	10	15

1.5.1/ Cut to size – Modular formats

On request, **Lapitec®** sheets can be supplied in modular formats which can be used in various combinations, respecting different alignments on the joints.

The proposed formats are merely suggestions for optimization of the **Lapitec®** sheet factory dimensions. Remember that the sheets can be cut and used in any other format.

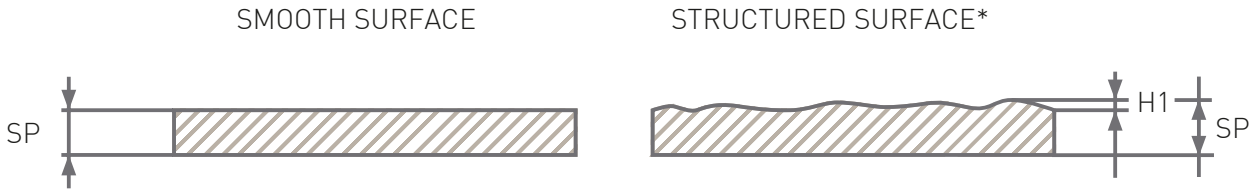


Attention: the modular formats indicated refer only to the 1/2 in and 3/4 in thicknesses. For 1 1/4 inch thick modular formats, contact Lapitec SpA.

1.6/ TOLERANCES

1.6.1/ Thickness

Nominal thickness TH	Tolerance (in)	H1 in
1/2	-0/+1/32	< 1/16
3/4	-0/+1/64	< 1/16
1 1/4	-0/+1/64	< 1/16



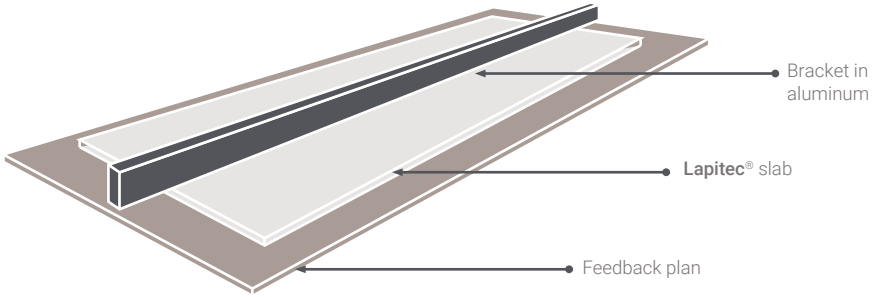
*STRUCTURED SURFACE: Fossil, Arena, Vesuvio, Dune

1.6.2/ Degrees of gloss

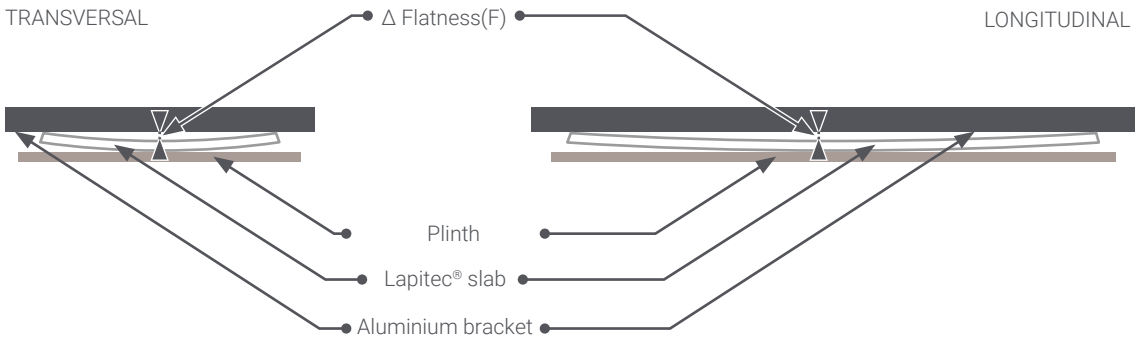
Finishing	GLOSS	
	Minimum	Same sheet variation
Lux	> 65	< 10
Satin	< 16	< 3
Vesuvio	< 5	< 3
Fossil	< 5	< 3
Arena	< 5	< 3
Lithos	< 5	< 3
Dune	< 5	< 3

The degrees of gloss are measured using a gloss meter on the finished surface. The gloss variation on the same sheet is verified through readings performed on the margins and the center of the sheet itself.

1.6.3/ Flatness



Thickness in inches	TRANSVERSAL		LONGITUDINAL	
	Width in inches	F in	Length in inches	F in
1/2-3/4-1 1/4	59	≤ 1/16	132 1/2	≤ 1/8



To correctly read the flatness, the sheet must rest on a perfectly horizontal and stable surface, therefore avoiding the use of sawhorses or measurements with the sheet hanging. The flatness is measured with an aluminum rod and thickness gage at the center of the sides: 29 1/2 in and 67 in.

1.6.4/ Shade of color

Lapitec® is a sintered natural material which, although created using an industrialized and controlled process, maintains a natural appearance. **Lapitec®** sheets are similar to natural stone products and therefore may have an appearance that enhances the similarities with the authenticity of the natural products.

In any case, verifying the uniformity of the shades of color of the sheets is advisable, even with sheets from the same batch, which could vary due to effects of firing. The shades of color of the material varies depending on the selected finish, and therefore depending on the surface mechanical manufacturing.

1.6.5/ Aesthetic conformity

Aesthetic conformity - Vesuvio, Fossil, Arena, Lithos, Dune

Type of non conformity	Size (in)
Macula of a different color	> 1/32
Inconsistent area	› 1/8
White granulate on dark field	Accetable up to 3/64 in

Aesthetic conformity - Lux and Satin

Type of non conformity	Dimensions in inches
Macula of a different color	> 1/32
Macula of a similar color	› 1/8
Hole	› 1/32
Inconsistent area	› 1/8
Scratch / Shading	If visible perpendicularly to the sheet at a distance of one yard, with natural light
White granulate on dark field	Accetable up to 1/16 in

*Bianco Assoluto/Nero Assoluto:

The dimensional tolerance is reduced to ≤ 1/32 in for the white granulate on black field and for the black granulate on white field.

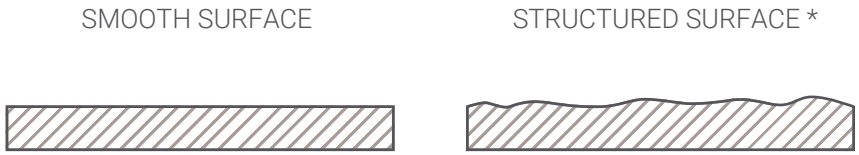
We recommend that our customers carefully clean and inspect the sheet before working. This procedure guarantees optimization in processing the material and verifies that all the quality standards have been complied with.

Tops: this should be a standard practice. Disputes will not be accepted on material laid with defects already present at the time of delivery.

1.7/ FINISHING SELECTION-CLEANING INDEX

The selection of a type of finish implies a careful assessment also of the ease of cleaning during use. The different finishes make cleaning operations more or less easy. Generally speaking, the smoother surfaces will be preferable where recurring cleaning is needed and where it is not possible to use equipment (e.g. pressure washers, industrial washers, etc.). **Lapitec®** can be exposed to most substances in common environments. Nevertheless, some products are particularly stubborn and removal from the surface of the sheets requires very deep cleaning cycles.

In the worst case scenario, the only solution is mechanical removal via abrasion with consequent restoration of the surface treatment (Bio-Care). As a guideline, a diagram is provided for the selection of the finish based on the degree of ease of cleaning of the surface. This index is attributed based on the context and therefore the easy of cleaning in the environment in which the **Lapitec®** is applied.



Finish	Kitchen worktop	Indoor flooring	Outdoor flooring	On vertical walls
Lux	A	A	A	A
Satin	A	A	A	A
Vesuvio	B	B	B	B
Fossil	N/A	N/A	C	C
Arena	N/A	N/A	C	C
Lithos	B	B	B	B
Dune	B	B	B	B
Urban	N/A	N/A	C	C
Velvet	A	A	A	A

KEY:

A. Easy cleanability
B. Normal cleanability
C. Cleanability with the use of equipment
N/A. Not applicable

1.8/ SAFE USE

For the determination of the non-slip properties, there are various assessment criteria. The different classifications are listed below based on the reference standard.

FINISH	DIN 51130	DIN 51097	UNI EN 14231 USRV
Lux	N.C.	N.C. (3,9°)	-
Satin	N.C.	N.C. (11°)	38 dry; 22 wet
Vesuvio	R10	A+B+C (24°)	49 dry; 30 wet
Lithos	R10	A+B (19°)	42 wet
Dune	R10	A+B (20°)	37 wet
Arena*	R13	A+B+C (>24°)	66 wet
Fossil*	R13	A+B+C (>35°)	81 dry; 64 wet

*Considering the non-slip properties of the surfaces with slipperiness grade of R ≥ 12, application is advisable only in fields of use where cleaning can be performed with high-pressure water.

DIN 51130

Slipperiness classification primarily with reference to commercial and industrial environments.

Key

N.C.: not classified; applications with gradients <6°

R9: Entrances and stairs with access from outdoors, shops, hospitals, schools, restaurants and cafeterias; applications with gradients between 6° and ≤10°

R10: Public bathrooms and showers, catering, garages and basements; applications with gradients between 10° and ≤19°

R11: Catering, work environments with a strong presence of water and mud, laboratories, laundries; applications with gradients between 19° and ≤27°

R12: Catering (industrial kitchens); food industry (oils, grease, dairy products and derivatives); industrial processing with the use of slippery substances, parking lots; applications with gradients between 27° and ≤35°

R13: Food industry with a high presence of grease; applications with gradients ≥35°

DIN 51097

Specific text for environments where people walk barefoot.

Key

N.C.: Not classified; applications with gradients <12°

A: Dressing rooms, areas accessed with bare feet between 12° and ≤18°

B (A+B): Public showers, pool edges; applications with gradients between 18° and ≤24°

C (A+B+C): Submerged pool edges, submerged stairs, water walkways, environments with standing water; applications with gradients ≥24°

UNI EN 14231

Determination of slip resistance using pendulum testing equipment.

Key

0–24 Slipperiness potential. Suitable for commercial locations

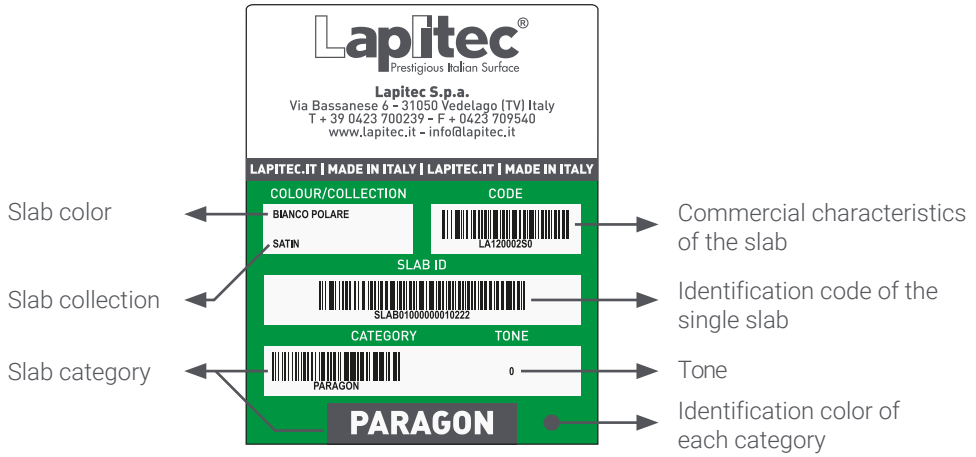
24–34 Limited resistance. Suitable for bathrooms and warehouses

35–64 Suitable. Suitable for outdoors, indoors, commercial areas and walkways, including stairs

>65 Very resistant. Suitable for outdoor use and gradients

1.9/ IDENTIFICATION LABEL

At the end of the production line, each sheet is identified with a unique adhesive label which bears all the production information of each individual sheet.



1.10/ TESTS AND CERTIFICATIONS

CATEGORY	COUNTRY	DESCRIPTION
Quality	INT	UNI EN ISO 14001
EPD	INT	ISO 14025 e EN 15804
LCA	INT	LCA in accordance with EN15804
SRI	INT	secondo ASTM E 1980-11; ASTM E 903-12; ASTM C 1371-15. Available for different colors and finishes.
Chemical emissions	INT	Green Guard e Green Guard Gold
REACTION TO FIRE	EU	A1 as per EN 13501-1
Environmental performance	INT	HK-G-PASS Platinum
Antibacterial properties	INT	Compliance in accordance with ISO 22196:2007 and ISO 7218:2007
Food Equipment Standard	US	Certification in accordance with NSF/ANSI 51
NKBA	US	National Kitchen & Bath Association member

2. PACKAGING AND HANDLING

2.1/ PACKAGING

Wood fasteners: standard packaging for shipment in container.

Sawhorses covered in wood: supplied by the customer for overland shipment.

Non-standard packaging: for material supplied cut-to-size. Packaging is decided based on the size, in crates or on pallets.

The values indicated below should be considered purely indicative.

Technical Information	U. M.	THICKNESS 1/2 in Values	THICKNESS 3/4 in Values	THICKNESS 1 1/4 in Values
Delivery	/	FCA - Lapitec S.p.A. Vedelago (TV) ITALY	FCA - Lapitec S.p.A. Vedelago (TV) ITALY	FCA - Lapitec S.p.A. Vedelago (TV) ITALY
Sheet surface	ft2	54.35	54.35	52.85
Sheet weight	lb	353	573	816
Weight per square foot	lb	6	10	15
Sheets per fastener	nr.	20 - 18*	12 - 11*	8 - 7*
Square feet per fastener	ft2	1087.18	652.31	434.87
Wood fastener weight	lb	Approx 176	Approx 176	Approx 176
Complete wood fastener	lb	Approx 7275	Approx 7275	Approx 7275
Fastener dimensions including packaging	in	135x14 h 63	135x14 h 63	135x14 h 63

* The variation of the number of sheets per fastener is due to the difference in thickness of the selected collections.

The **Lapitec®** sheets are packaged with the finished surface protected by a polyethylene film. The courier must adequately ensure the material in the loading phase.

2.2/ TRANSPORT

During transport and storage in the warehouse and/or on the job site, the **Lapitec®** sheets must be placed on specific metal supports or structures such as sawhorses or dedicated shelving. These supports must be in good condition and appropriately treated in order to prevent any phenomenon of oxidation that may soil the sheets.

Specific wooden, rubber or plastic guards must also be provided and arranged in order to prevent impact on the edges of the sheets or abrasions of the surfaces both during transport and during handling and storage of the material.

Should plastic elements be used to separate or protect the sheets, avoid direct exposure to heat sources or prolonged periods in direct sunlight.

Lapitec® is not affected by the action of atmospheric agents and can be stored outdoors. Nevertheless, phenomena of standing water on the surface or on the edges of the sheets (rain, snow or condensation) could cause water stains that are difficult to remove. Should it be necessary to store the sheets outdoors for prolonged periods, we recommend using an outdoor protective tarp.

2.2.1/ Truck

Load capacity: 30.865 lb

Technical Information	U. M.	THICKNESS 1/2 in Values	THICKNESS 3/4 in Values	THICKNESS 1 1/4 in Values
Total sheets that can be loaded	nr.	87	53	37
Total weight with packaging	lb	30.842	30.534	30.335
Total square feet	ft2	4729.28	2881.05	2011.30

2.2.2/ Trailer

Load capacity: 52.911 lb

Technical Information	U. M.	THICKNESS 1/2 in Values	THICKNESS 3/4 in Values	THICKNESS 1 1/4 in Values
Total sheets that can be loaded	nr.	149	91	64
Total weight with packaging	lb	52.867	52.470	52.514
Total square feet	ft2	8099.57	4946.72	3479

2.2.3/ Container 46.297 lb

Load capacity: 46.297 lb

Technical Information	U. M.	THICKNESS 1/2 in Values	THICKNESS 3/4 in Values	THICKNESS 1 1/4 in Values
Total fasteners that can be loaded	nr.	6	6	7
Total sheets per container	nr.	120 - 108*	72 - 66*	48 - 42*
Total weight with packaging	lb	Approx 43.651	Approx 43.651	Approx 43.651
Total square feet	ft2	6523.14 - 5870.83	3913.88 - 3587.73	2609.26 - 2283.10

2.2.4/ Container 52.910 lb

Load capacity: 52.911 lb

Technical Information	U. M.	THICKNESS 1/2 in Values	THICKNESS 3/4 in Values	THICKNESS 1 1/4 in Values
Total fasteners that can be loaded	nr.	7	7	7
Total sheets per container	nr.	140 - 126	84 - 77	56 - 49
Total weight with packaging	lb	Approx 50.927	Approx 50.927	Approx 50.927
Total square feet	ft2	7610.33 - 6849.30	4566.720 - 4185.68	3044.13 - 2663.62

** When organizing a container, the weight limits imposed by the destination port must be considered

2.3/ SLABS INSPECTION

We recommend that our customers carefully clean and inspect the sheet before working. This procedure guarantees optimization in processing the material and verifies that all the quality standards have been complied with.

Tops: this should be a standard practice. Disputes will not be accepted on material laid with defects already present at the time of delivery.

2.4/ HANDLING

The sheets should always be moved and handled on their sides to prevent bending, being very careful in order to avoid chipping and breaking of the material. Any breakage could compromise the performance of the sheet once installed and subjected to stress.

Lapitec® must always be handled with gloves in order to prevent any cuts and/or deposits of dirt on the sheet.

2.4.1/ Manual handling

Any format that exceeds 55 lbs (9 5/32 square feet, 1/2 in - 5 3/8 square feet, 3/4 in - 3 15/64 square feet, 1 1/4 in) and in general any format characterized by long measurements, must be handled by two workers. The workers must be careful to avoid accidental bumps, damaging the edges of the surface of the **Lapitec®** sheets. If any impact should occur, the workers must ensure that no damage has been caused. Any breakage could compromise the performance of the sheet once installed and subjected to stress.

Lapitec® must always be handled with gloves in order to prevent any cuts and/or deposits of dirt on the sheet.

2.4.2/ Handling with equipment

Before proceeding, always ascertain the maximum load capacity.

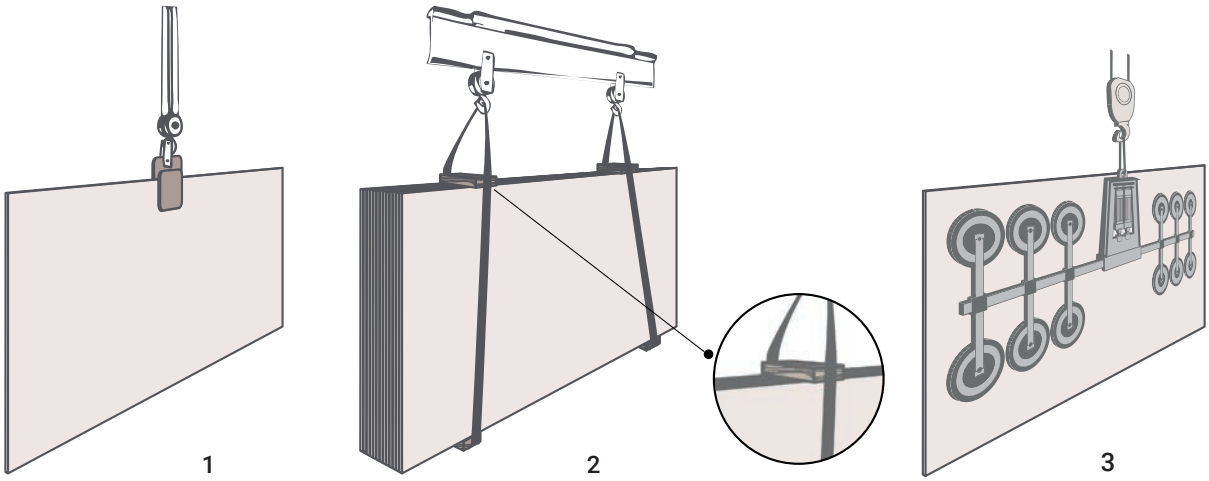
The individual sheet can be handled using rubber-coated cloth straps, rubber-coated grippers or suction cups. For Arena, Dune, Vesuvio and Fossil finished surfaces, handling using suction cups should be avoided. In no case should chains or steel cables be used because they could ruin the material.

To grip the individual sheet, we recommend positioning the gripper at the center of the load to balance the weight and limit oscillation (as illustrated in figure 1). When a sheet is deposited with the gripper, ensure that there are no empty spaces between the sheet being positioned and the support (any other sheet or surface).

For multiple pick-ups, we recommend using a balance and cloth straps spaced on the bottom and top of the sheets by a wooden spacer slightly longer than the sheet pack (as illustrated in figure 2).

This way, the tension applied during handling does not weigh on the sheets, preventing breakage of the material.

Handling using suction cups is permitted (as illustrated in figure 3). We recommend using compression suction cups. To handle the sheets with more structured finishing such as Vesuvio, Dune, Arena and Fossil, it is advisable to assess the type of suction cup to be used for handling.



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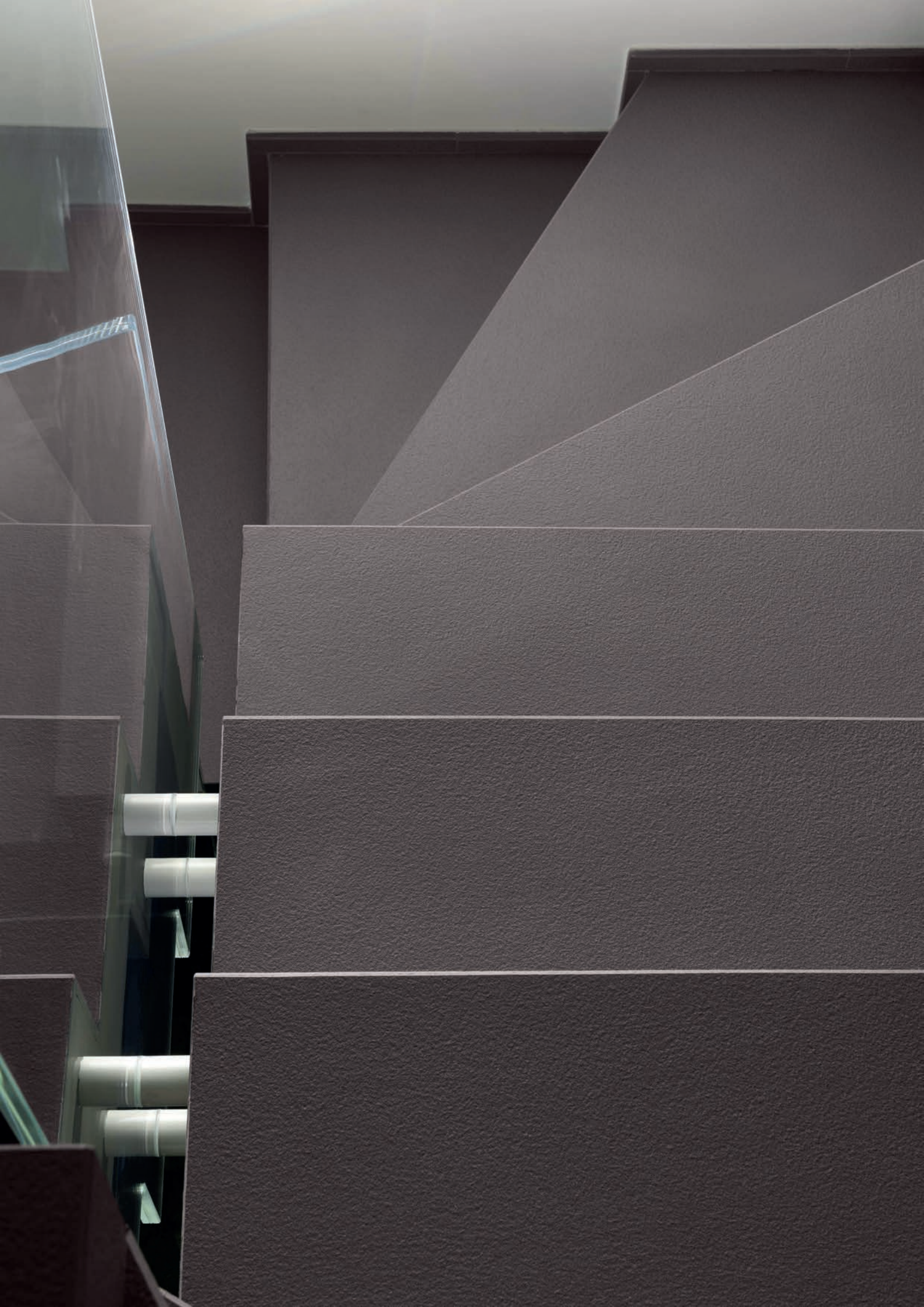

3. LAPITEC SPA

Customer Care

All of the experience gained on international projects and through different assignments is exploited to perfect the product and accessories sold by Lapitec S.p.A. Through direct contact with customers, Lapitec SpA searches constantly for new solutions to make the service more and more complete and efficient for the various needs of use.

Should there be particular needs, please contact Lapitec SpA customer care at

customercare@lapitec.com

LapitecACADEMY - Training center

LapitecACADEMY is the division that handles training and supporting professionals who work with **Lapitec®** through training in the company and direct assistance. Thanks to the Academy Community service, all innovations and technical developments are promptly spread throughout the entire network of collaborators.

By participating in training courses conducted by LapitecACADEMY, each professional can earn Approved Fabricator certification and learn useful tips and techniques for working with **Lapitec®**.

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