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— 3/4" THICKNESS

PENNSYLVANIA

the new bluestone

POPA 2.0

AN ITALIAN PORCELAIN PAVER MADE IN USA



 3/4" THICKNESS

PENNSYLVANIA

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AN ITALIAN PORCELAIN PAVER MADE IN USA

25 YEARS AGO KRONOS ESTABLISHED AN
AESTHETIC AND BUSINESS MODEL THAT
HAS BROUGHT MORE THAN TWO DECADES
OF SUCCESS, CONTINUING TO OFFER TO
THE CUSTOMERS SOMETHING UNIQUE:
A COMPASS TO GUIDE IN THE SEARCH FOR
AUTHENTICITY, ELEGANCE AND QUALITY.

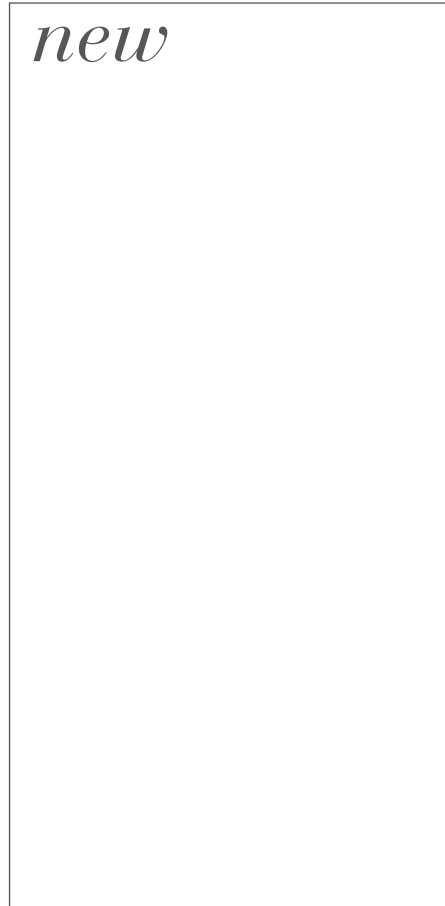


KRONOS USA SEARCHES
THE PAST AND CONSISTENT
WITH TRADITION REVISITS
PENNSYLVANIA BLUESTONE:
EXTREMELY RESISTANT
WITH A HIGH AESTHETIC
COMPONENT.
BLUESTONE WAS CHOSEN
BECAUSE IT IS THE TYPICAL
AMERICAN STONE FOR
OUTDOOR AND LANDSCAPING
INSTALLATION.

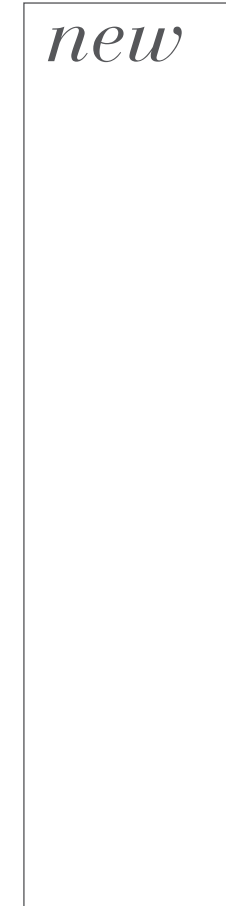




PENNSYLVANIA BLUESTONE
PORCELAIN PAVERS BY
KRONOS, WITH 3/4" THICKNESS
HAS BEEN SELECTED
BASED ON ITS LOW WATER
ABSORPTION AND STAIN
RESISTANCE. IT IS EXTREMELY
EASY TO CLEAN, INCREDIBLE
FREEZE-THAW DURABILITY
AND STRENGTH, ESPECIALLY
SIGNIFICANT IN THE COLDER
REGIONS OF THE UNITED
STATES AND CANADA.



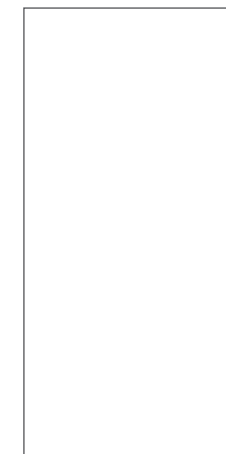
23 1/2" x 47 1/8" rectified
60x120 cm



11 3/4" x 47 1/8" rectified
30x120 cm



23 1/2" x 23 1/2" rectified
60x60 cm



11 3/4" x 23 1/2" rectified
30x60 cm

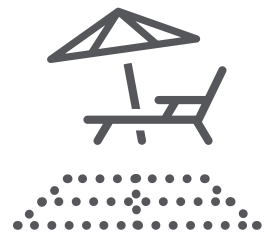


11 3/4" x 11 3/4" rectified
30x30 cm

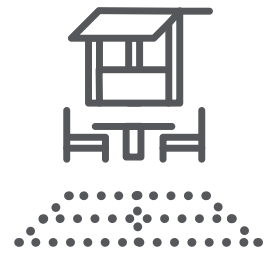
THE LONG-TERM
PERFORMANCE AND
SLIP-RESISTANCE OF
PENNSYLVANIA BLUESTONE
BY KRONOS MAKE IT AN
EXCELLENT CHOICE FOR MANY
APPLICATIONS:



PATIOS



POOL DECKS



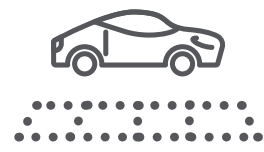
TERRACES



WALKWAYS



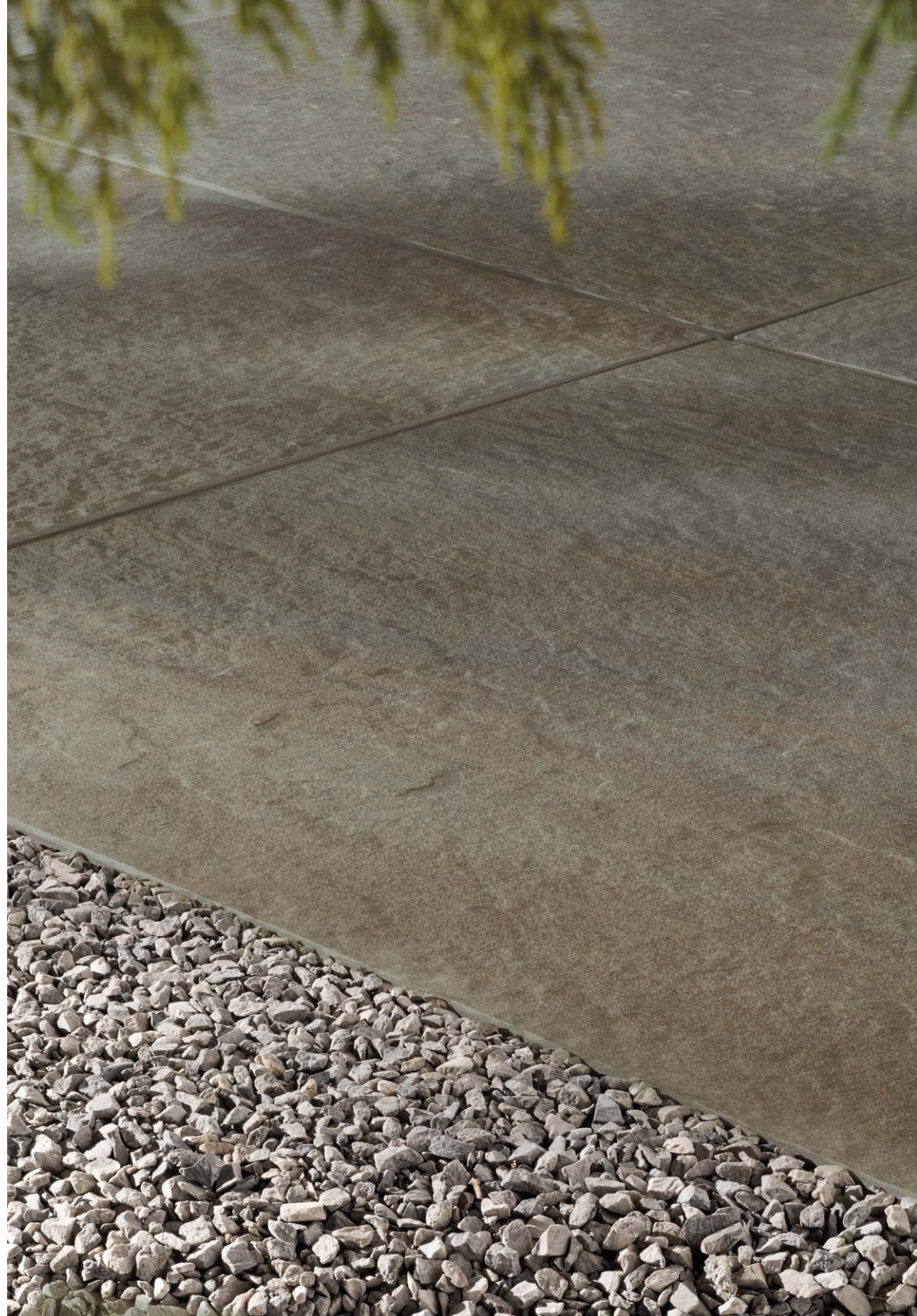
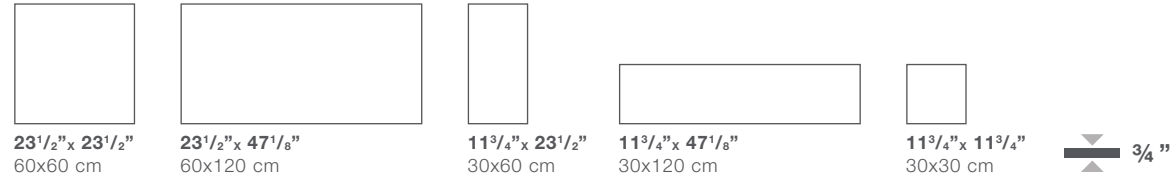
STAIRS AND STEPS



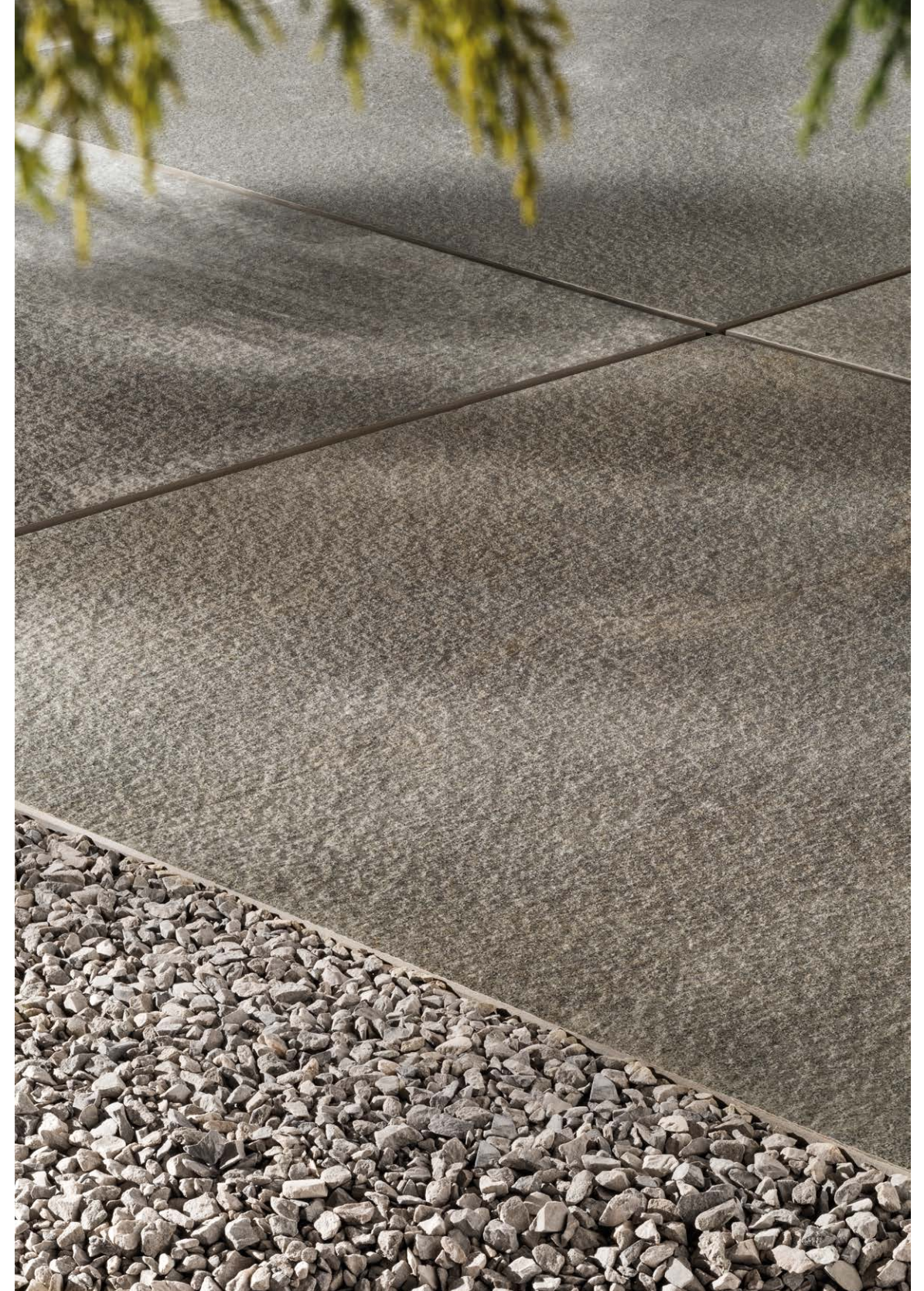
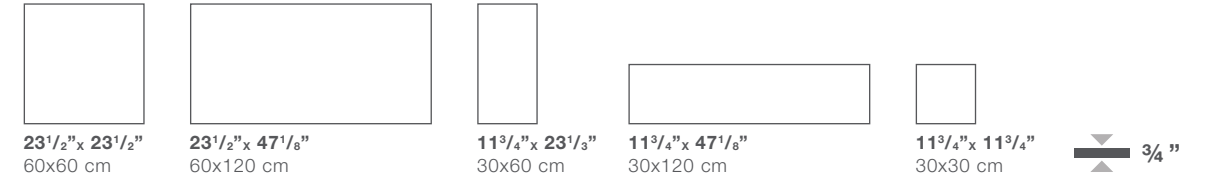
DRIVEWAYS



Full Color Cleft Pattern



TrueBlue Thermal Pattern





PENNSYLVANIA the new

Indoor: TrueBlue Thermal Pattern
23 1/2" x 23 1/2" - 60x60 cm
11 3/4" x 23 1/2" - 30x60 cm
11 3/4" x 11 3/4" - 30x30 cm
Outdoor: Full Color Cleft Pattern
23 1/2" x 47 1/8" - 60x120 cm



Indoor: TrueBlue Thermal Pattern
23¹/₂" x 23¹/₂" - 60x60 cm
11³/₄" x 23¹/₂" - 30x60 cm
11³/₄" x 11³/₄" - 30x30 cm
Outdoor: Full Color Cleft Pattern
23¹/₂" x 23¹/₂" - 60x60 cm



TrueBlue Thermal Pattern
23¹/₂" x 23¹/₂" - 60x60 cm
11³/₄" x 23¹/₂" - 30x60 cm
11³/₄" x 11³/₄" - 30x30 cm





Full Color Cleft Pattern
23¹/₂" x 23¹/₂" - 60x60 cm
11³/₄" x 23¹/₂" - 30x60 cm
11³/₄" x 11³/₄" - 30x30 cm



Full Color Cleft Pattern
23¹/₂" x 23¹/₂" - 60x60 cm
11³/₄" x 23¹/₂" - 30x60 cm
11³/₄" x 11³/₄" - 30x30 cm



TrueBlue Thermal Pattern
23¹/₂" x 23¹/₂" - 60x60 cm
11³/₄" x 23¹/₂" - 30x60 cm
Full Bullnose Coping
11³/₄" x 23¹/₂" - 30x60 cm



TrueBlue Thermal Pattern
 23 1/2" x 23 1/2" = 60x60 cm
 11 3/4" x 23 1/2" = 30x60 cm
 11 3/4" x 11 3/4" = 30x30 cm



PENNSYLVANIA

the new bluestone

AN ITALIAN PORCELAIN PAVER MADE IN USA

**FULL COLOR CLEFT PATTERN
 TRUEBLUE THERMAL PATTERN**



23 1/2" x 47 1/8" rectified
 60x120 cm



23 1/2" x 23 1/2" rectified
 60x60 cm



11 3/4" x 23 1/2" rectified
 30x60 cm



11 3/4" x 47 1/8" rectified
 30x120 cm



11 3/4" x 11 3/4" rectified
 30x30 cm

Full Color Cleft Pattern



23¹/₂" x 47¹/₈" rectified
60x120 cm



23¹/₂" x 23¹/₂" rectified
60x60 cm



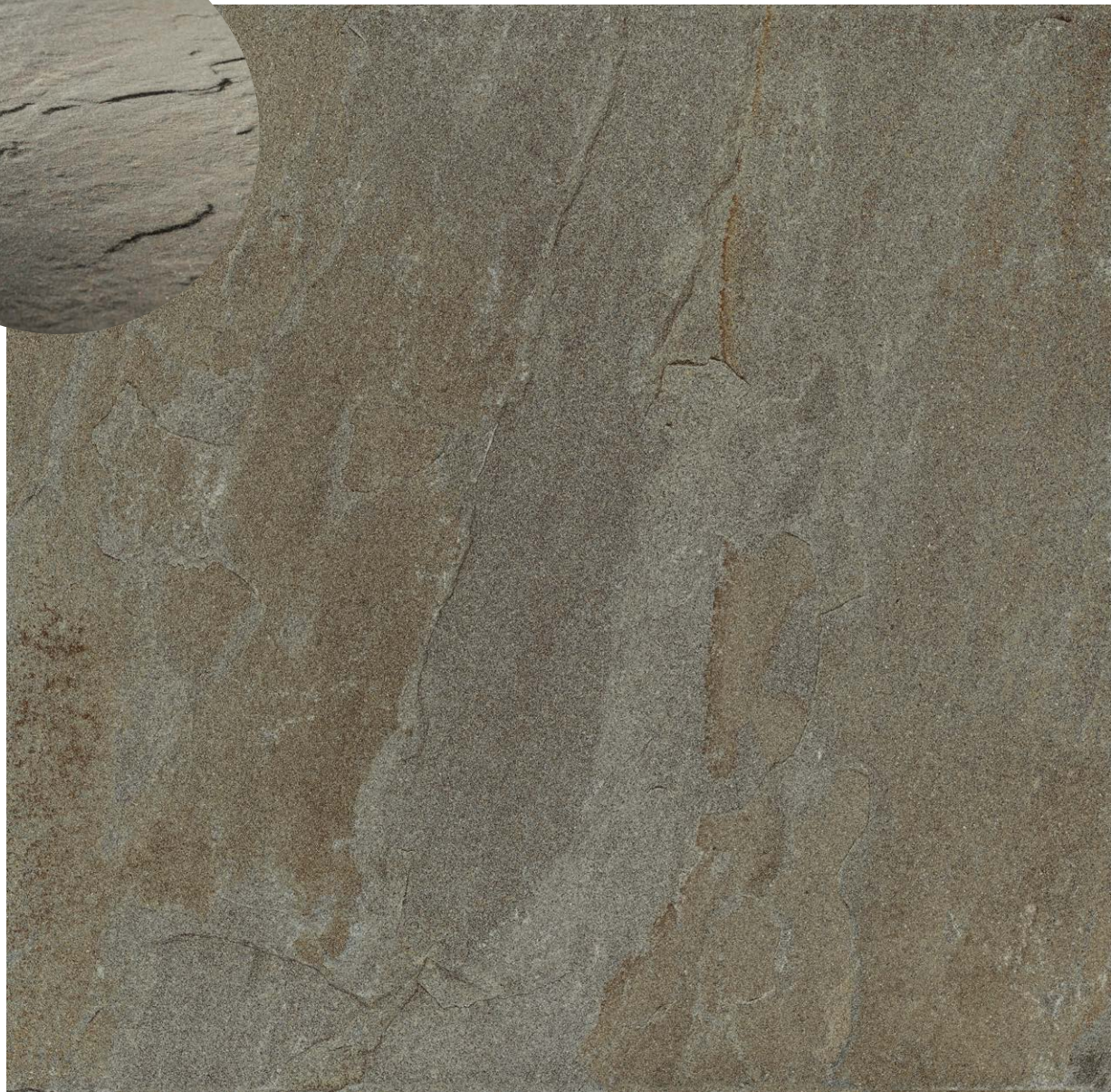
11³/₄" x 23¹/₂" rectified
30x60 cm



11³/₄" x 47¹/₈" rectified
30x120 cm



11³/₄" x 11³/₄" rectified
30x30 cm



TrueBlue Thermal Pattern



23¹/₂" x 47¹/₈" rectified
60x120 cm



23¹/₂" x 23¹/₂" rectified
60x60 cm



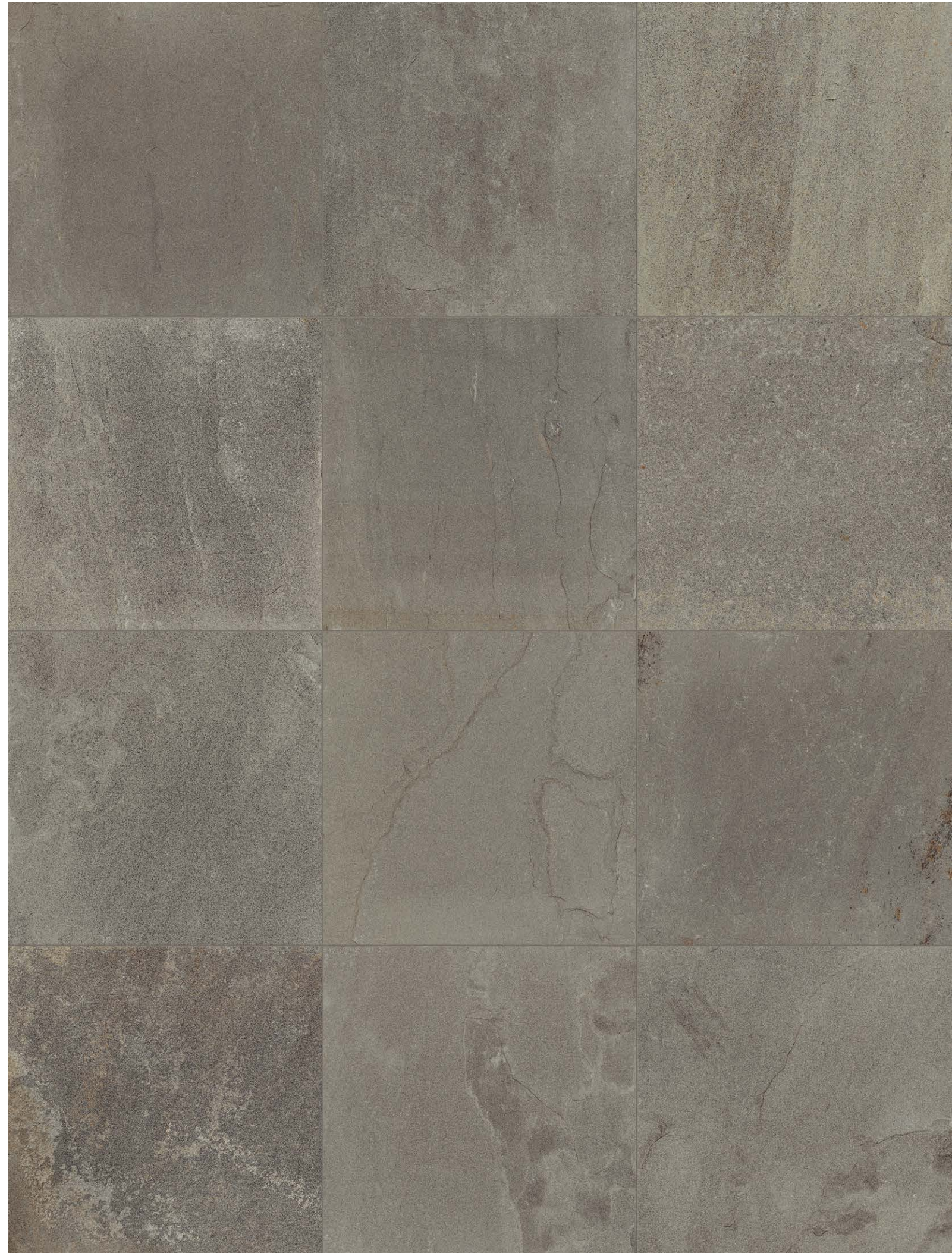
11³/₄" x 23¹/₂" rectified
30x60 cm



11³/₄" x 47¹/₈" rectified
30x120 cm



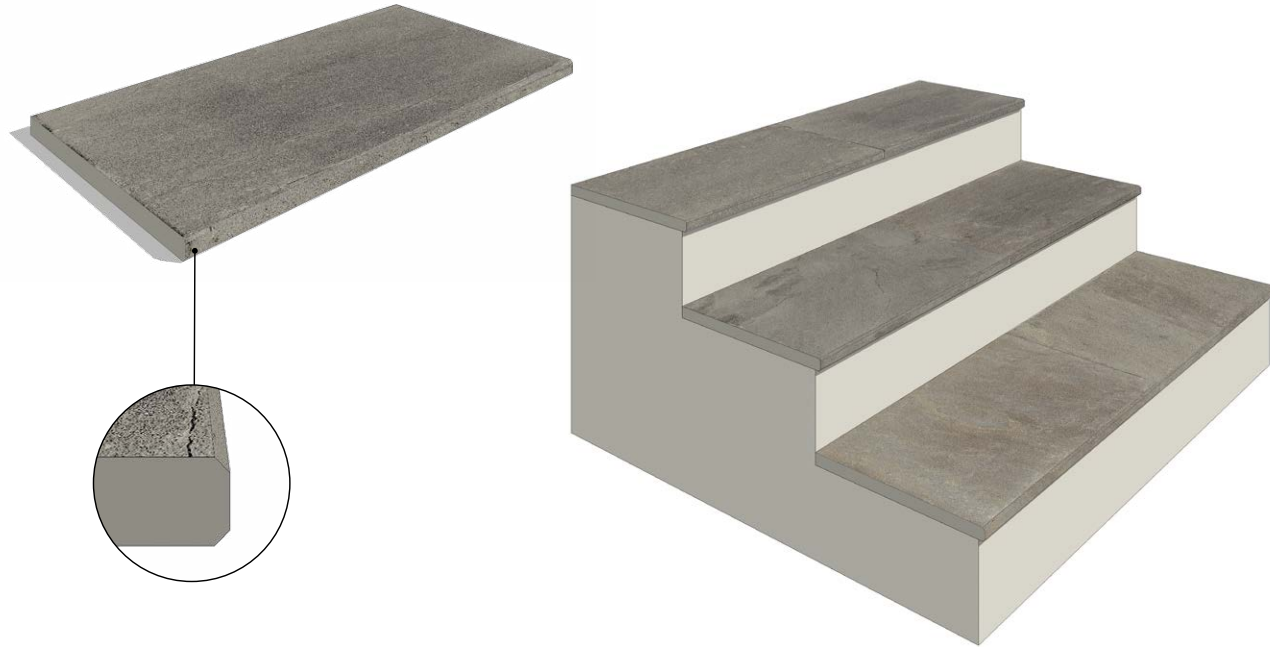
11³/₄" x 11³/₄" rectified
30x30 cm



Special pieces

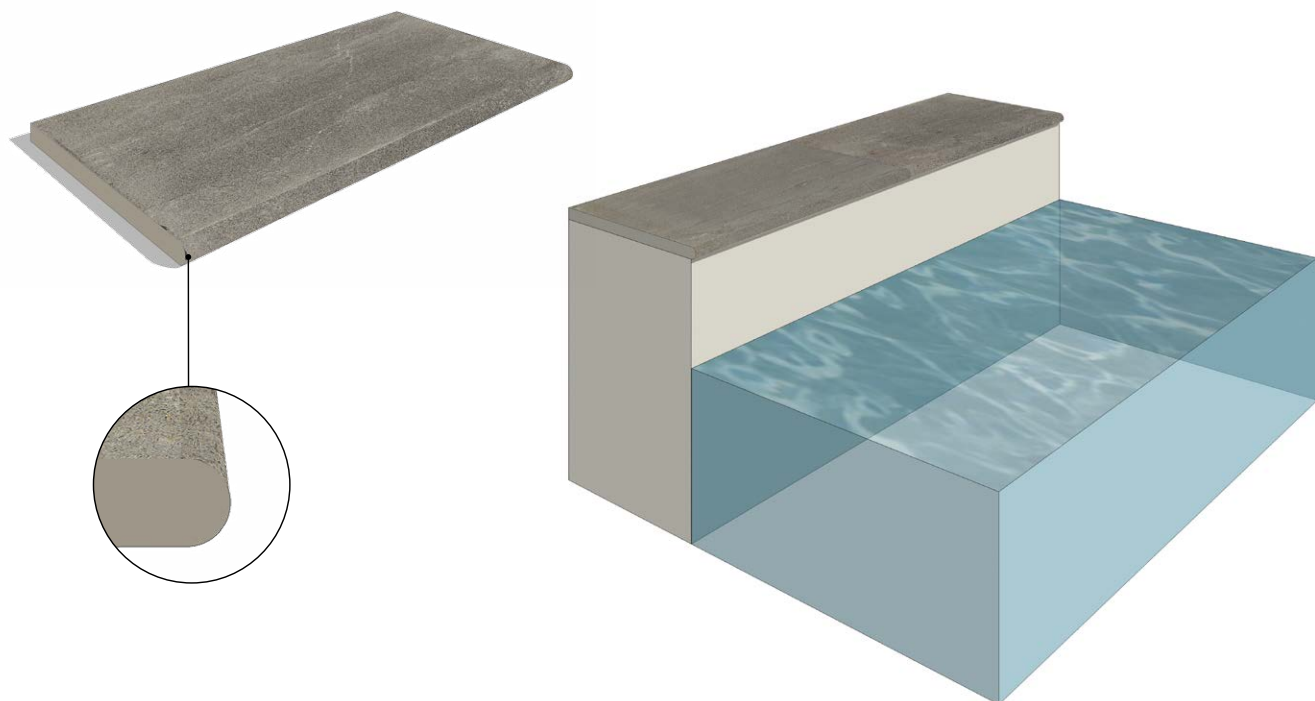
DOUBLE BEVEL COPING

11 3/4" x 23 1/2" - 30x60
Available in all colours.



FULL BULLNOSE COPING

11 3/4" x 23 1/2" - 30x60
Available in all colours.



Advantages

LIGHTER AND EASIER TO HANDLE THAN CONCRETE BLOCKS

SUPERIOR IN FIRE RESISTANCE AND DURABILITY TO WOOD TILES

SUPERIOR IN STRENGTH AND IMPACT RESISTANCE TO CERAMIC TILES SUPPORTS OVER 2000LB

RESISTANT TO DAMAGE BY FROST, SNOW, ICE AND HEAT (-40°F - 210°F)

REMOVABLE AND REUSABLE

EASY TO CLEAN STAIN, CHEMICAL AND SALT RESISTANT

EASY TO INSTALL

SLIP RESISTANT AND QUICK DRAINING

THERMAL INSULATION (HOT/COLD)

Installation

INSTALLATION ON GRASS



INSTALLATION ON GRAVEL



ADHESIVE INSTALLATION ON FOOTING



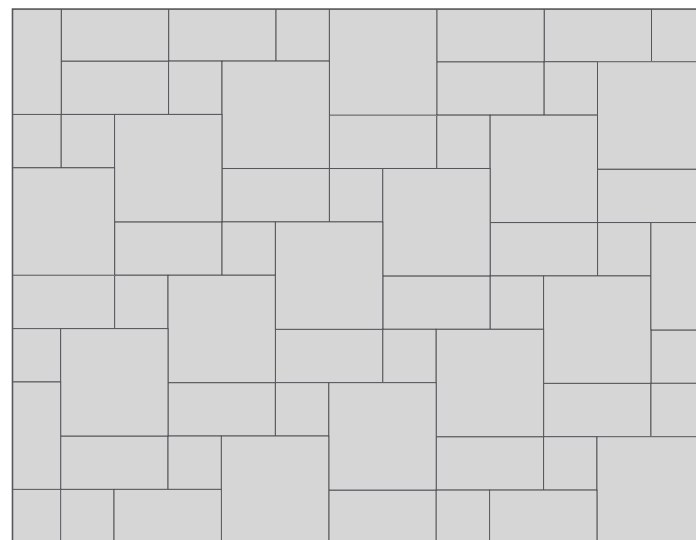
FLOATING INSTALLATION ON SPACER FEET



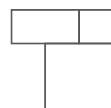
RAISED INSTALLATION ON FLAT SURFACES



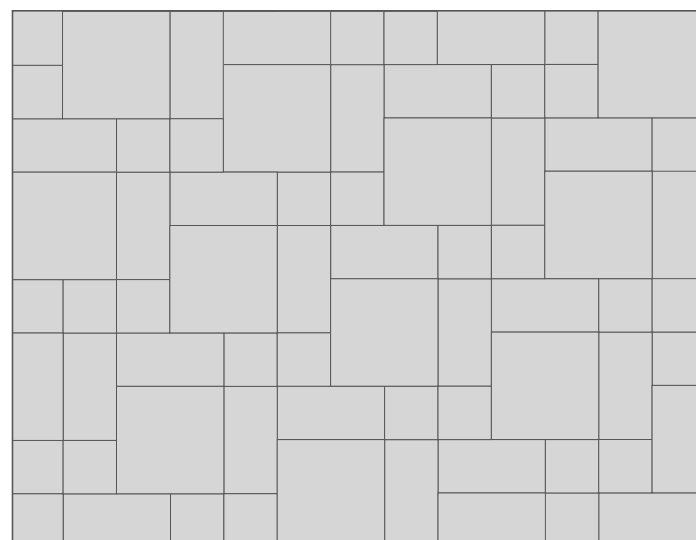
Patterns



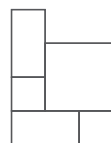
A layng solution



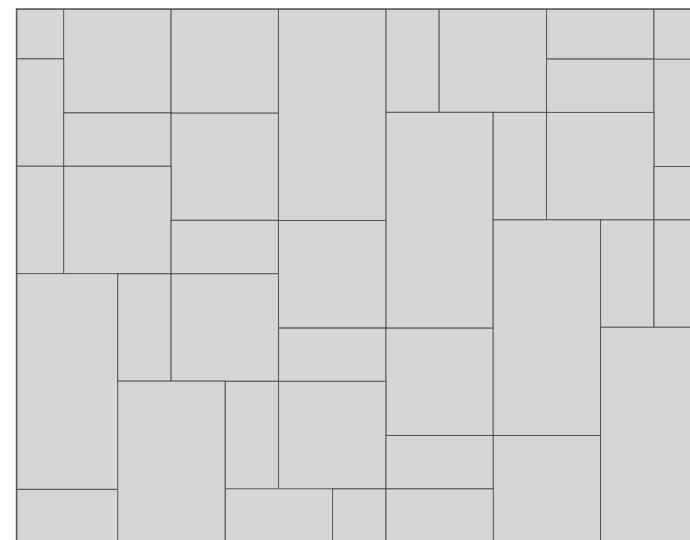
Nr. 1 pcs	$23\frac{1}{2}'' \times 23\frac{1}{2}''$ - 60x60 cm	57,2%
Nr. 1 pcs	$11\frac{3}{4}'' \times 23\frac{1}{2}''$ - 30x60 cm	28,5%
Nr. 1 pcs	$11\frac{3}{4}'' \times 11\frac{3}{4}''$ - 30x30 cm	14,3%



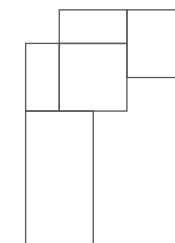
B layng solution



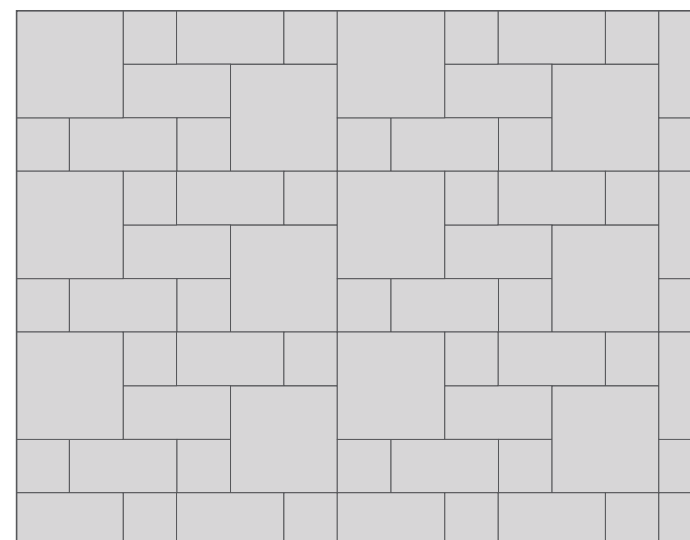
Nr. 1 pcs	$23\frac{1}{2}'' \times 23\frac{1}{2}''$ - 60x60 cm	40%
Nr. 2 pcs	$11\frac{3}{4}'' \times 23\frac{1}{2}''$ - 30x60 cm	40%
Nr. 2 pcs	$11\frac{3}{4}'' \times 11\frac{3}{4}''$ - 30x30 cm	20%



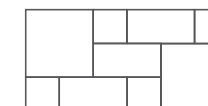
D layng solution



Nr. 1 pcs	$23\frac{1}{2}'' \times 47\frac{1}{2}''$ - 60x120 cm	40%
Nr. 2 pcs	$23\frac{1}{2}'' \times 23\frac{1}{2}''$ - 60x60 cm	40%
Nr. 2 pcs	$11\frac{3}{4}'' \times 11\frac{3}{4}''$ - 30x30 cm	20%



C layng solution



Nr. 2 pcs	$23\frac{1}{2}'' \times 23\frac{1}{2}''$ - 60x60 cm	44,5%
Nr. 3 pcs	$11\frac{3}{4}'' \times 23\frac{1}{2}''$ - 30x60 cm	33,3%
Nr. 4 pcs	$11\frac{3}{4}'' \times 11\frac{3}{4}''$ - 30x30 cm	22,2%

Summary of Technical data

PLUS vs MINUS		
Data:	KRONOS PENNSYLVANIA <i>bluestone</i>	NATURAL PENNSYLVANIA BLUESTONE
Water absorption	0,05%	1,6%
Resistance to stain	all	not guaranteed
Chemical Resistance	resistant	not guaranteed
Fade resistance on exposure to light and W rays	no fading or change in color	change in color
Surfaces fragility	it does not flake and does not crumble	it flakes and crumbles
Lenght and Width	Dimension proportions are guaranteed	Dimension proportions are not guaranteed
Uniformity of thickness	guaranteed	not guaranteed
Frost and salt resistance	guaranteed	not guaranteed
Slip resistance	guaranteed	not guaranteed
Installation on pedestals / Raised floor	guaranteed	not guaranteed
Average Weight	46 kg / sqm 9.38 lbs / sq.ft.	Real full color 160 kg / sqm 32.7 lbs / sq.ft. Real trueblue 110 kg / sqm 22.5 lbs / sq.ft.
Breaking Strenght / Flexural Strenght	3800 lbf	1900 lbf

PACKAGING

2.0 MONOLITHIC RECTIFIED CERAMIC TILE	Thickness	Unit / Box	SqFt / Box	Boxes / Pallet	SqFt / Pallet	Weight / Box	Weight / M ²	Weight / SqFt	Weight / Pallet (included)	Pallet Size
23 1/2" x 47 1/8"	3/4" - 20mm	2	15,5	16	248	149 lb	100 lb	9,3 lb	2384 lb	49"x 49"
11 1/4" x 47 1/8"	3/4" - 20mm	4	15,5	16	248	153 lb	100 lb	9,3 lb	2448 lb	49"x 49"
23 1/2" x 23 1/2"	3/4" - 20mm	2	7,75	36	279	72 lb	100 lb	9,3 lb	2650 lb	42" x 42"
11 1/4" x 23 1/2"	3/4" - 20mm	4	7,75	40	310	72 lb	100 lb	9,3 lb	2955 lb	42" x 42"
11 1/4" x 11 1/4"	3/4" - 20mm	5	4,85	45	218	45 lb	100 lb	9,3 lb	2100 lb	42" x 42"



TECHNICAL CHARACTERISTICS

STANDARS	CHARACTERISTICS OR PROPERTIES	COMPLIANCE WITH STANDARDS UNI EN 14411 G ASTM	DECLARED VALUE
ISO - 10545-3 ASTM - C 373-88	Water absorption	E <= 0.5 %	< 0.1 %
ISO - 10545-9 ASTM - C 484	Thermal shock resistance	Requested	Complies with standard
ISO - 10545-12 ASTM - C 1026	Frost resistance	Requested	Complies with standard
ISO - 10545-6 ASTM C - 1243-93	Abrasive wear	<175 mm ²	139 mm ²
ISO - 10545-2	Straightness / ASTM - C 485	+/- 0.75 % (+/- 1.8 mm)	Complies with standard
	Straightness / ISO - 10545-2	+/- 0.5 % (+/- 1.5 mm)	Complies with standard
	Thickness / ASTM - C 499	+/- 1.02 mm	Complies with standard
	Thickness / ISO - 10545-2	+/- 0.5 % (+/- 0.5 mm)	Complies with standard
	Length and width / ASTM - C 499	+/- 0.5 % (+/- 2.0 mm)	Complies with standard
ISO - 10545-4 Bending strength in N (thickness >= 7.5 mm)	Length and width / ISO - 10545-2	+/- 0.6 % (+/- 2.0 mm)	Complies with standard
	ASTM - C 648 ANSI A 137.1 (PORCELAIN TILE)	>= 275 LBF Average >= 250 LBF Individual	>= 2500 LBF
ISO - 10545-4	ISO - 10545-4	>= 1300 Newton	> 13000
ASTM - C 650	Chemical resistance	As reported	Resistant
ISO 10545-14	Resistance to stain	-	5
ISO 10545-13	Chemical resistance	UB min.	UA ULA UHA
ISO 10545-8	Coefficient of linear thermal-expansion	-	$\alpha=6.3 \times 10^{-6} \text{ } ^\circ\text{C}^{-1}$
ISO 10545-5	Impact resistance	-	0.88
EN 12825	Static load	-	Centre 9.6 Kn Centre point of sides 6.5 Kn Diagonal 8.19 Kn (CLASSE 3)
	Dymanic laod capacity - hand object impact test	-	Test not passed
	Dymanic laod capacity - soft object impact test	-	Test passed
EN 1339	Bendind strength - breaking force in N	Kn 14.38	classe 14
ENV 12633	Slip resistance	> / = CL1	CL 2
DIN 51130	Slip resistance	-	R11
DIN 51097	Slip resistance	-	A + B + C min.
DM 236/89 B.C.R.A.	Slip resistance	-	> 0.40
Static coefficient of friction ASTM 1028-07 BOT 3000 Dynamic coefficient of friction (sectio n 9.6 ANSIA 137.1 2012)	Slip resistance	-	> 0.60 WET > 0.60 DRY >= 0.42
EN 13501-1	Fire resistance	-	A1 - A1 FL
* TAS 108 FLORIDA BUILDING CODE WIND UP LIFT TEST	3/4" thick 24"x24" porcelain installed on fixed height pedestals and 45° wind angle was blow of at	-	130 mph with no parapet 150 mpt with 12" high parapet

*To put this into context, the Saffir-Simpson Hurricane Wind Scale which is a 1 to 5 rating based on a hurricane's sustained wind speed, defines wind speeds over 74 mph to be hurricane velocity where:
 - Category 1 (74-95 mph) "Very dangeorus winds will produce some damage"
 - Category 2 (96-110 mph) "Extremely dangerous winds will cause extensive damage"
 - Category 3 (111-129 mph) "Devastating damage will occur"

In the wester North Pacific, the term "super typhoon" is used for tropical cyclones with sustained winds exceeding 150 mph.



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