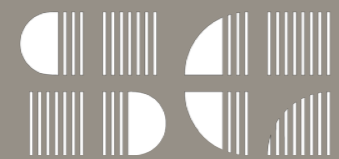
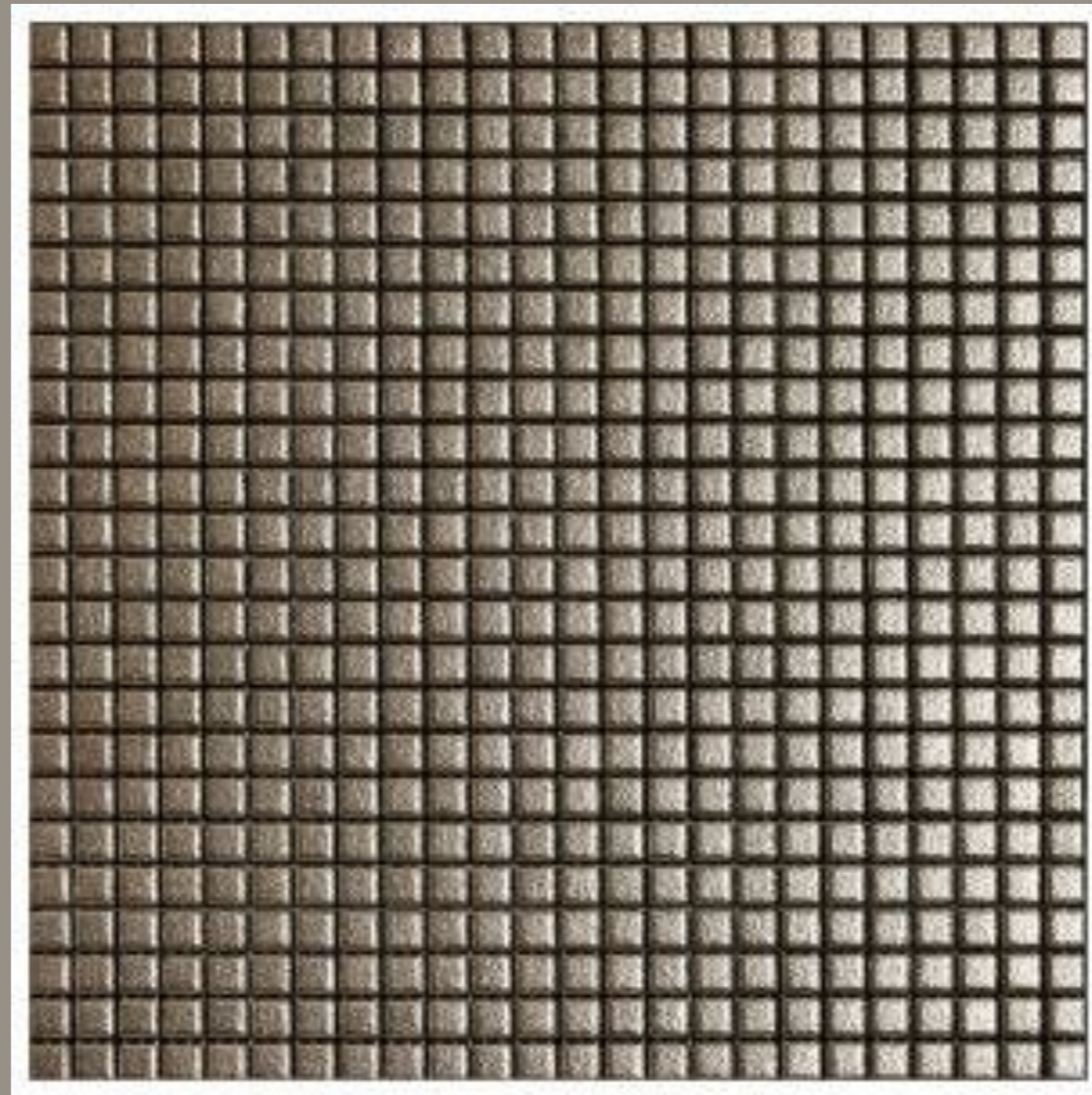
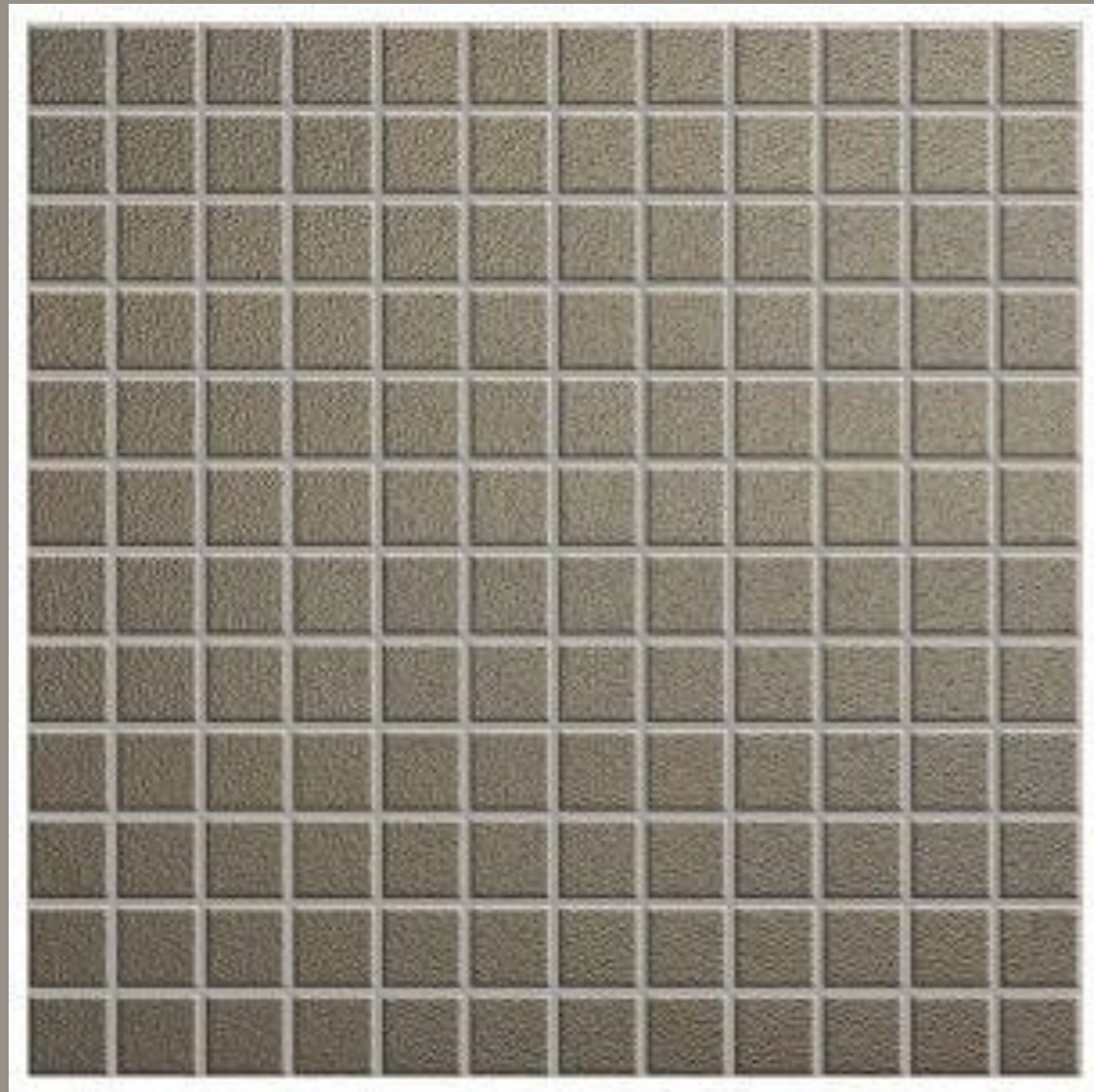


STONEGRES

# METALLICA



STONÉGRES

The Metallica collection in single-press firing has a distinctive metal finish that, with its many varied shades, allows the actualization of mosaic projects with unique light and reflection effects tailor-made for design of interiors and for covering of exterior facades.

Material with a lustrous finish, a certain je ne sais quoi that makes them irresistible. Whether it's the luminescence of copper or the glimmer of gold, lustrous materials are always eye-catching.







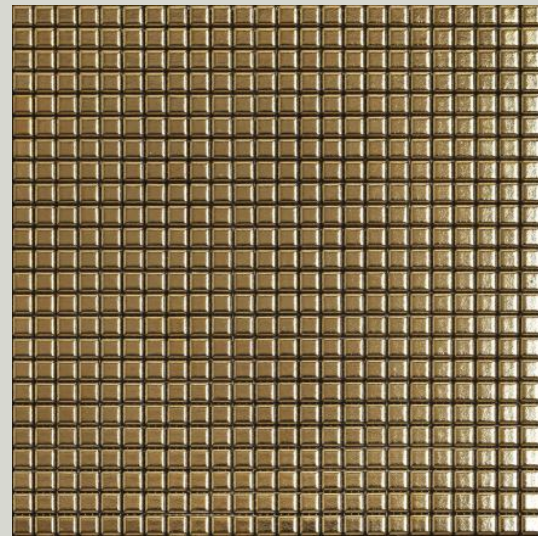


## BLEND IDEAS

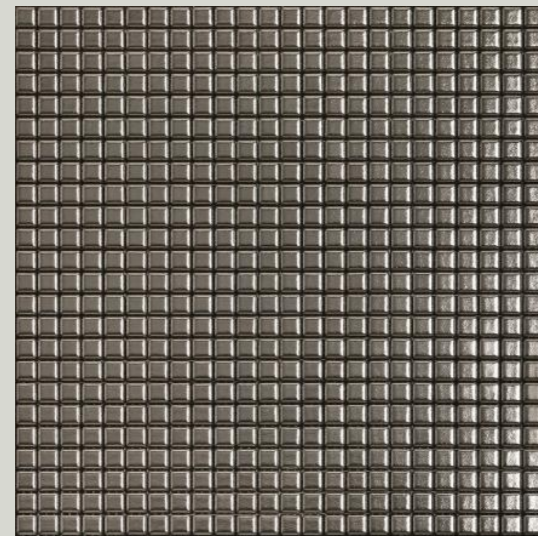
try mixing metallica with our other ranges of mosaics



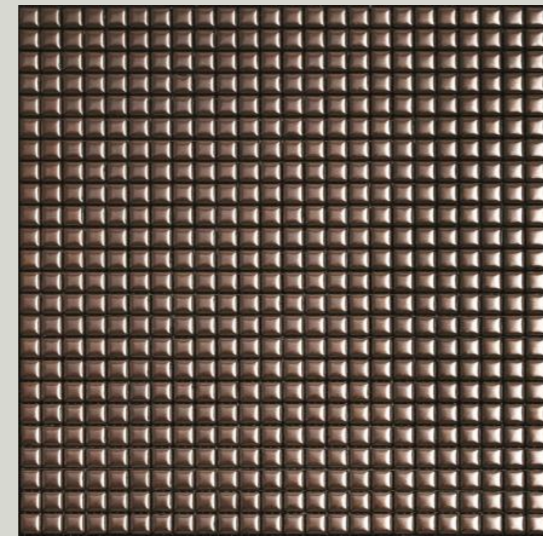
# COLOURS



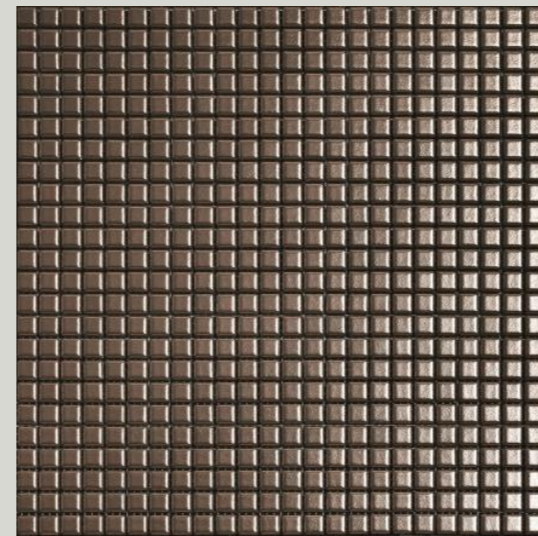
oro  
ORO 4000



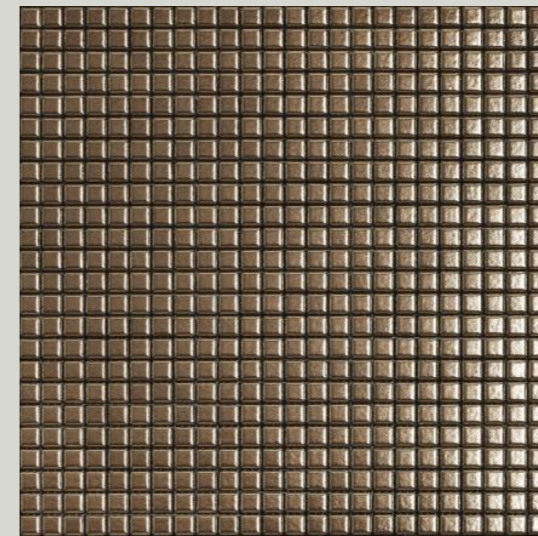
platino  
PLA 4000



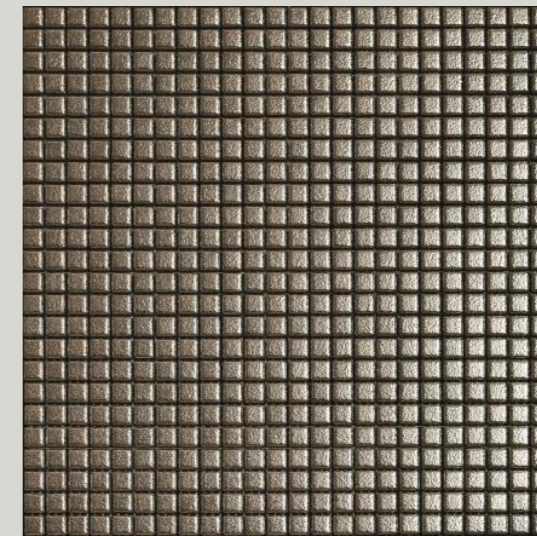
rame  
MTLC413



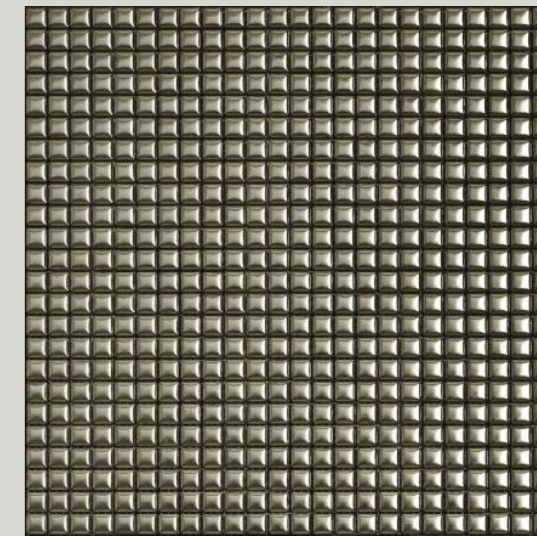
cuprite  
MTL 4007



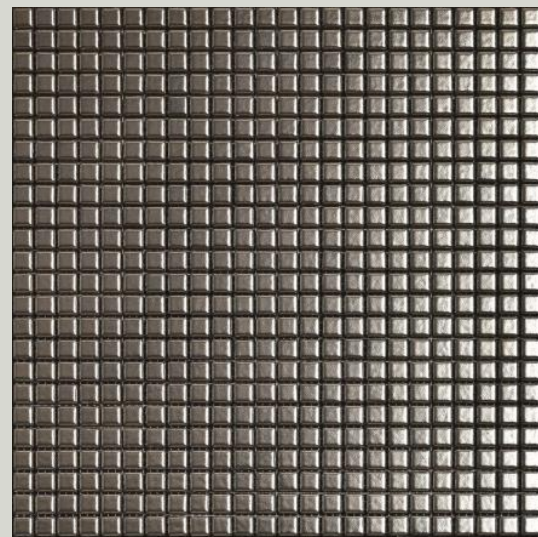
bronzo  
MTL 4004



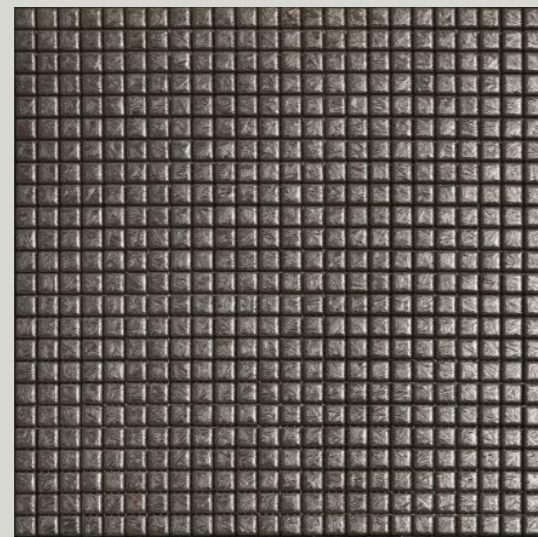
pirite  
MTL 4005



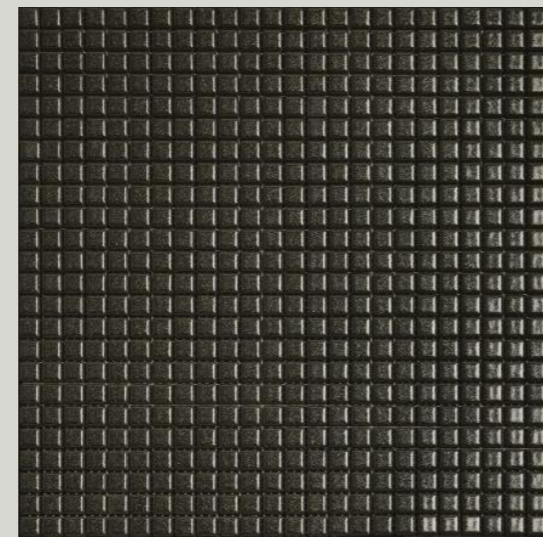
acciaio  
MTLC412



alluminio  
MTL 4006



cristalli  
MTL 4009

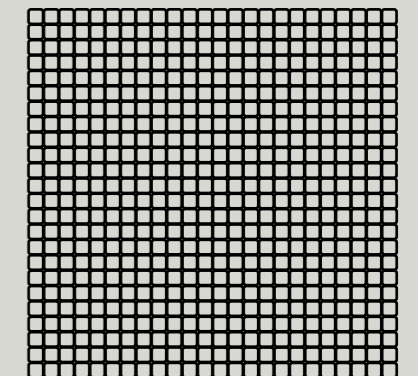


riflessi  
MTL 4011

sheet size 300 x 300 mm (net mounted)

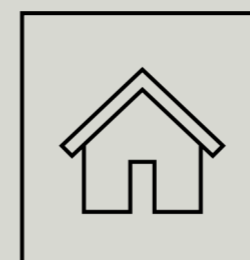
mosaic size 12 x 12 mm

abrasion coefficient:  
(PEI) II CUPRITE | BRONZO | PIRITE | ACCIAIO | ALLUMINIO | CRISTALLI | RIFLESSI



12 x 12 mm

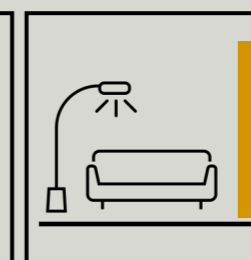
## application



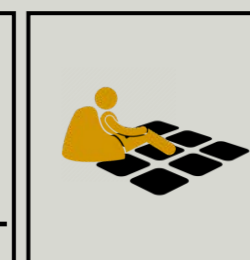
INDOOR



OUTDOOR



WALLS

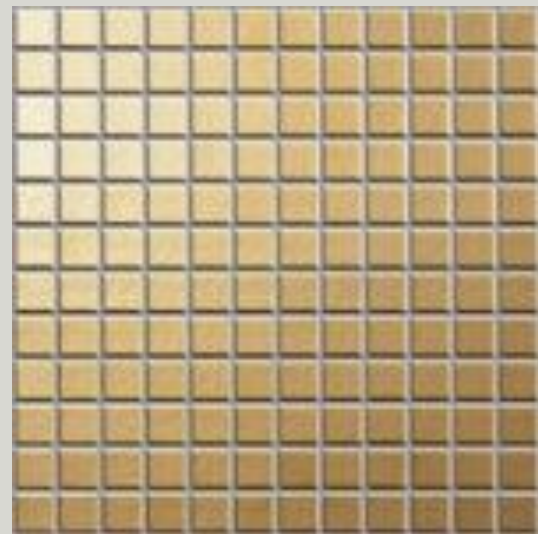


FLOORS

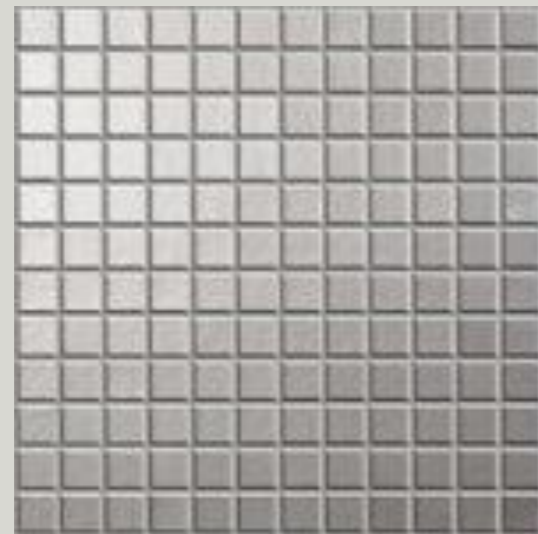


# COLOURS

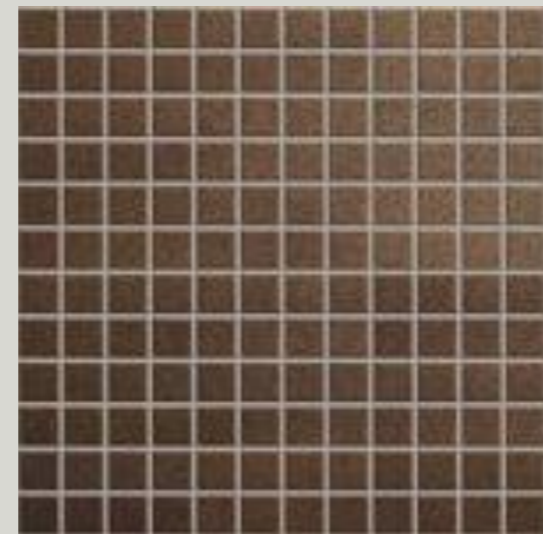
# TECHNICAL CHARACTERISTICS



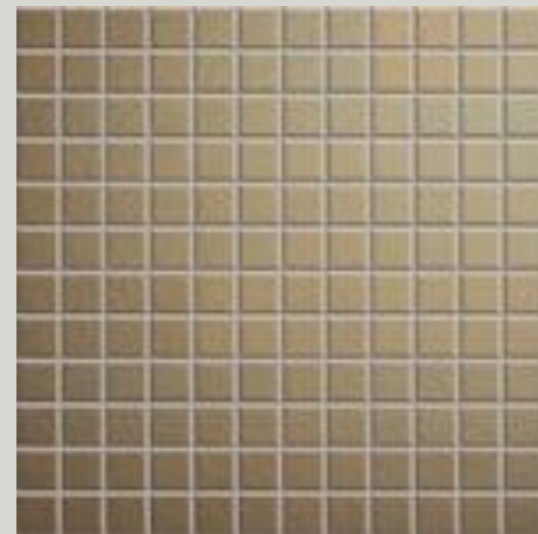
oro  
ORO 7000



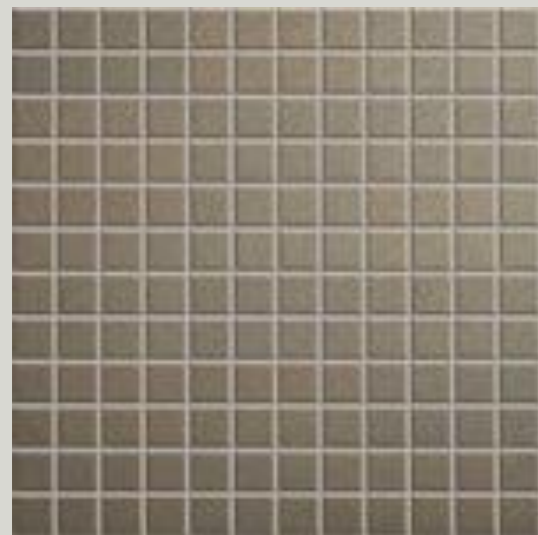
platino  
PLA 7000



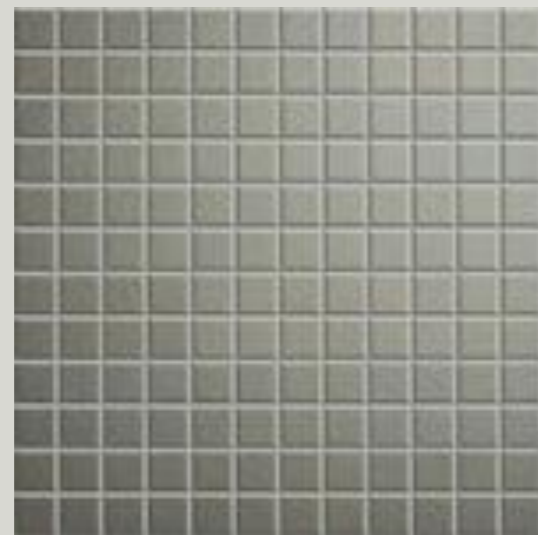
cuprite  
MTL 7007



bronzos  
MTL 7004



pirite  
MTL 7005



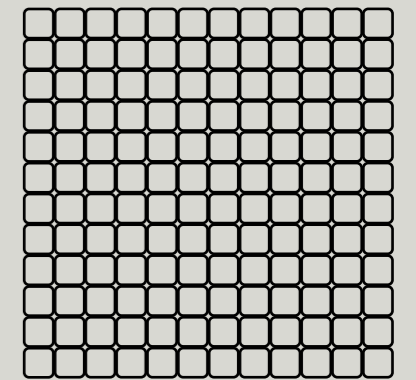
alluminio  
MTL 7006



cristalli  
MTL 7009



riflessi  
MTL 7011



25 x 25 mm

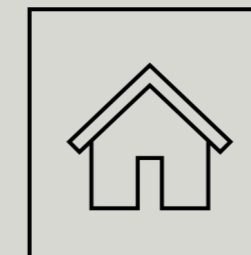
sheet size 300 x 300 mm (net mounted)

mosaic size 25 X 25 mm

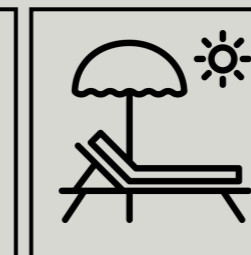
abrasion coefficient:

(PEI) II CUPRITE | BRONZO | PIRITE | ALLUMINIO | CRISTALLI | RIFLESSI

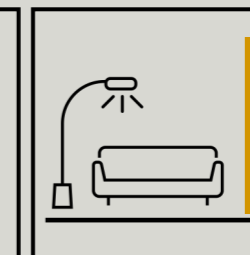
## application



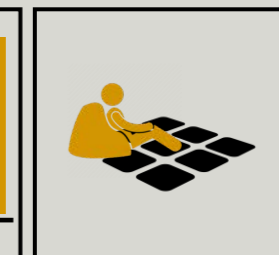
INDOOR



OUTDOOR



WALLS



FLOORS

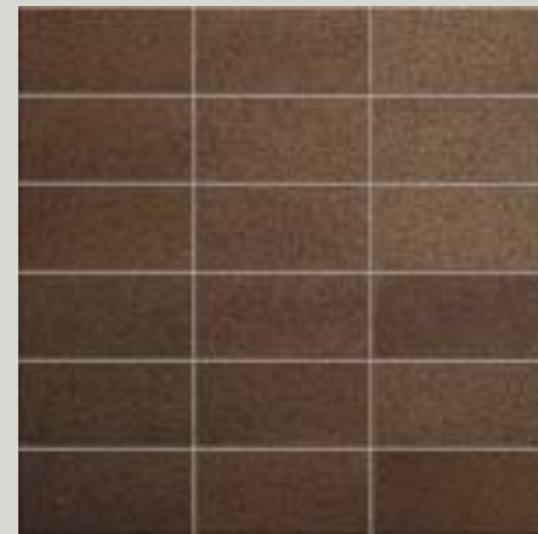
# COLOURS



cuprite  
MTL 2007



bronzo  
MTL 2004



cuprite  
MTL 2007



pirite  
MTL 2005



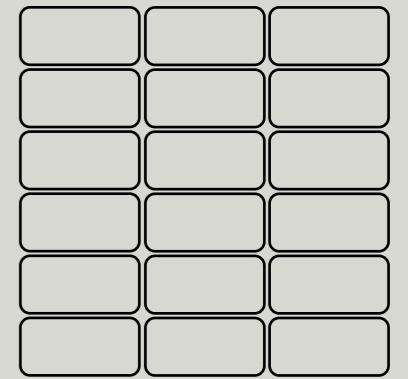
alluminio  
MTL 2006



cristalli  
MTL 2009



riflessi  
MTL 2011



50 x 100 mm

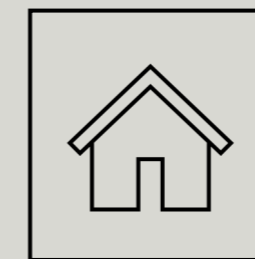
sheet size 300 x 300 mm (net mounted)

mosaic size 50 X 100 mm

abrasion coefficient:

(PEI) II CUPRITE | BRONZO | PIRITE | ALLUMINIO | CRISTALLI | RIFLESSI

## application



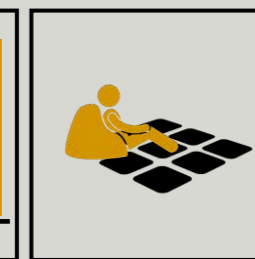
INDOOR



OUTDOOR



WALLS



FLOORS



## CERAMIC MOSAICS GRIP

Maximum contact surface for gluing -  
 Glue can be spread all over the tile - Glue adheres completely, forming a single body with the stoneware surface - Will not come away over time

## JOINT FILLING

Fills the whole joint and glue adheres perfectly, because the spaces are even and wide enough - Filler is compact, guaranteeing the hold of the tesserae in water and ensuring they do not come away

## SIDES AND THICKNESS

Perpendicular sides and slightly rounded glazed surface - Maximum mechanical hold thanks to the "spike" effect of the filler - Excellent resistance to lateral thrust

## WARPAGE

Even surface - Pleasant to the touch

## TRANSPARENCY

Totally opaque glaze - Colour remains stable over time

## CLEANING AND HYGIENE

Even surface - Glaze does not retain dirt - Total hygiene - Easy to clean



## GLASS MOSAICS GRIP

Limited contact surface for gluing - Adheres with difficulty due to vinyl glue residue on the back of the tesserae -  
 glassy surface repels the adhesive - Risk of the tesserae coming away over time

## JOINT FILLING

Difficult to fill the whole joint because of the small, uneven spaces - Filler tends to partially erode if submerged in water where algae form; possibility of the tesserae coming away

## SIDES AND THICKNESS

Slanted sides with the joint thrusting outwards - Minimum lateral hold of the joint - Considerable reduction in mechanical hold

## WARPAGE

Uneven surface - Unpleasant to the touch

## TRANSPARENCY

Loss of brightness - Change in colour

## CLEANING AND HYGIENE

Uneven surface - Dirt takes hold - Minimum hygiene - Difficult to clean

	NORM				
	DIN51130	DIN51097			
			12 x 12 mm	25 x 25 mm	50 x 100 mm
bronzo MTL 04	R9	A		MTL7004	MTL2004
	R9	A+B	MTL4004		
pirite MTL 05	R9	A		MTL7005	MTL2005
	R9	A+B	MTL4005		
alluminio MTL 06	R9	A		MTL7006	MTL2006
	R9	A+B	MTL4006		
cuprite MTL 07	R9	A		MTL7007	MTL2007
	R9	A+B	MTL4007		
crystalli MTL 09	R11	A+B+C	MTL4009	MTL7009	MTL2009
riflessi MTL 11	R9	A		MTL7011	MTL2011
	R9	A+B	MTL4011		
acciaio MTL 12	R9	A			
	R9	A+B	MTLC412		
rame MTL 13	R9	A			
	R9	A+B	MTLC413		
oro	R9	A		ORO7000	
	R9	A+B	ORO4000		
platino	R9	A		PLA7000	
	R9	A+B	PLA4000		

## BOND STRENGTH TESTING

this method covers the determination of the ability of mosaic to be bonded to paste under controlled conditions

Tests are carried out according to approved standards

### ASTM C 482-02 (R2009)

material tested	bond strength of ceramic tile
ceramic mosaic 12x12 mm with back-mounted fiberglass mesh	6.9
ceramic mosaic 25x25 mm with back-mounted fiberglass mesh	2.8

#### NOTE

higher is the indicated value, better is the bond strength

## UNDERFLOOR HEATING

mosaics are suitable for laying on underfloor heating systems, complying with the following requirements:-

- o reduced thickness in single-press firing (7.2mm)
- o good thermal conductivity of ceramic material
- o minimum amount of glue required for laying
- o use of cement-based grouts for filling


following these requirements will ensure the effective technical performance of the system, ensuring the optimal passage of heat and maintaining an ideal temperature in the room, whilst making the floor comfortable to the touch.












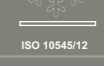
ISO: METALLICA

Single press-firing

glazed ceramic tiles, dry pressed with low water absorption  
 0.5% < E ≤ 3% - group B I b - M - GL - EN 14411 appendix H

		standard	tolerances	results
 SURFACE DIMENSIONS & QUALITIES	sides 298.4X298.4 mm	EN ISO 10545-2	± 0.5%	± 0.2%
	thickness 7.2 mm	EN ISO 10545-2	± 5%	± 4%
	straightness of edges	EN ISO 10545-2	± 0.5%	± 0.4%
	squareness	EN ISO 10545-2	± 0.6%	± 0.4%
	surface qualities	EN ISO 10545-2	< 95%	< 95%
	surface flatness	EN ISO 10545-2	± 0.5%	± 0.4%

Single press-firing

physical properties	standard	requirements	results
 WATER ABSORPTION <small>ISO 10545-3</small>	ISO 10545-3	0.5% < E ≤ 3% appendix H	≤ 1%
 BREAKING STRENGTH IN N <small>ISO 10545-4</small>	ISO 10545-4	700 min. appendix H	> 1800
 FLEX RESISTANCE <small>ISO 10545-4</small>	ISO 10545-4	30 min. appendix H	> 50 N/mm <sup>2</sup>
 IMPACT RESISTANCE <small>ISO 10545-5</small>	ISO 10545-5	testing method available	> 0.6 (appendix P)
 ABRASION RESISTANCE <small>ISO 10545-7</small>	ISO 10545-7	indicated by producer	see colours notes
 COEFFICIENT OF THERMAL LINEAR EXPANSION <small>ISO 10545-8</small>	ISO 10545-8	testing method available	< 7·10 <sup>-6</sup> /°C
 THERMAL SHOCK RESISTANCE <small>ISO 10545-9</small>	ISO 10545-9	testing method available	guaranteed
 MOISTURE EXPANSION <small>ISO 10545-10</small>	ISO 10545-10	testing method available	< 0.04%
 CRAZING RESISTANCE <small>ISO 10545-11</small>	ISO 10545-11	required	guaranteed
 FROST RESISTANCE <small>ISO 10545/12</small>	ISO 10545-11	required	guaranteed


ISO: METALLICA

Single press-firing


chemical properties	standard	requirements	results
 <p>CHEMICAL RESISTANCE</p> <p>ISO 10545-13</p>	EN ISO 10545-13		
	resistance to chemical products for housekeeping & to the additives used in swimming pools	GB min	GB min
	resistance to diluted acid & alkali solutions	indicated by producer	GLB min
	resistance to highly concentrated acid & alkali solutions	testing method available	on request
 <p>FIRE RESISTANCE</p>		decision 96/603/CE	class A1
 <p>STAIN RESISTANCE</p> <p>ISO 10545-14</p>	EN ISO 10545-14	class 3 min.	3 min (appendix P)
 <p>LEAD &amp; CADMIUM DISCHARGE</p> <p>ISO 10545-15</p>	EN ISO 10545-15	testing method available	on request
 <p>RESISTANCE OF COLOURS TO SUNLIGHT</p> <p>DIN 51094</p>	DIN 51094	not envisaged	guaranteed








CLASSIFICATION

 ASSESSMENT OF SLIP RESISTANCE	standard	requisites	classification group
	DIN 51130 (feet with shoes on)	6° ÷ 10°	R9
		10° ÷ 19°	R10
		19° ÷ 27°	R11
		27° ÷ 35°	R12
		> 35°	R13
	DIN 51097 (feet with shoes on)	< 12°	0
		≥ 12°	A
		≥ 18°	B
≥ 24°		C	

METALLICA

 ASSESSMENT OF SLIP RESISTANCE	standard	nominal shape	results
	DIN 51130	12x12 mm – ½" x ½"	R9 (7.2°)
	DIN 51097	12x12 mm – ½" x ½"	B (A+B) (19.7°)

physical properties	standard	requirements	results
 WATER ABSORPTION <small>ASTM C373</small>	ASTM C373	$0.5\% < w_a \leq 3\%$	$\leq 3\%$ class P2
 BREAKING STRENGTH IN lbf <small>ASTM C648</small>	ASTM C648	$\geq 250$ lbf	$\geq 250$ lbf
 THERMAL SHOCK RESISTANCE <small>ASTM C484</small>	ASTM C484	testing method available	guaranteed
 CRAZING RESISTANCE <small>ASTM C424</small>	ASTM C242	required	guaranteed
 FROST RESISTANCE <small>ASTM C1026</small>	ASTM C1026	required	guaranteed

chemical properties	standard	requirements	results
 CHEMICAL RESISTANCE <small>ASTM C650</small>	ASTM C650	indicated by producer	guaranteed
 STAIN RESISTANCE <small>ASTM C1378</small>	ASTM C1378	required	guaranteed

 ASSESSMENT OF SLIP RESISTANCE	test method	requisites	results
	ANSI A137.1 (DEN test)	DCOF > 0.42	0.47
	ANSI A137.1 (DAS test)	DCOF > 0.42	0.69

Single press-firing: dry-pressed ceramic tiles obtained with single-press kiln firing, with low water absorption.  $0,5\% < E \leq 3\%$  Group B I b - M - GL - EN 14411 appendix H (sizes 1,2x1,2 - 2,5x2,5 - 5x10 - 10x10 cm). Slow firing cycle. Freeze resistant.

