



TECHNICAL CHARACTERISTICS	REFERENCE STANDARD	REQUIRED VALUE	AVG. VALUE		
DIMENSIONS	ISO 10545-2	Compliant	Compliant		
WATER ABSORPTION	ISO 10545-3	≤0,5 %	<0,1%		
MODULUS OF RUPTURE	ISO 10545-4	MODULUS OF RUPTURE R ≥ 35 N/mm ² BREAKING STRENGTH S ≥ 1300 N	R>50 N/mm ² S>2500 N		
SCRATCH RESISTANCE	ISO 10545-7	0 - V	IV		
LINEAR THERMAL EXPANSION	ISO 10545-8	≤ 9x10 ⁻⁵ °C ⁻¹	6x10 ⁻⁵ °C ⁻¹		
THERMAL SHOCK RESISTANCE	ISO 10545-9	Resistant	Resistant		
FROST RESISTANCE	ISO 10545-12	Resistant	Resistant		
ACID AND ALKALI RESISTANCE	ISO 10545-13	CLASS GB MIN.	Low concentr. GLA High concentr. GHA		
CHEMICAL RESISTANCE	ISO 10545-13	CLASS GB MIN.	GA		
STAIN RESISTANCE	ISO 10545-14	CLASS 3 MIN.	5		
FRICTION COEFFICIENT (SLIPPERINESS)	BCR - Italia DM del 14-06-89	ASTM - USA ASTM C1028	DIN - Germania DIN 51130		
	Dry rubber 0,62	Wet rubber 0,51	Dry leather 0,62	Dry neolythe 0,69	Wet neolythe 0,62
DYNAMIC COEFFICIENT OF FRICTION (DCOF)	ANSI A137.1-2012	MIN. 0,42	> 0,42 Wet		

THE PRODUCTS HAVING AN ABSORPTION < 0.5% ARE CLASSIFIED ACCORDING TO THE UNI CEN STANDARDS "FULLY VITRIFIED TILES" AND ACCORDING TO THE ASTM STANDARDS "IMPERVIOUS TILES"

**1/2 BROKEN JOINT NOT RECOMMENDED.
MANUFACTURE RECOMMENDS 1/3 OR LESS STAGGERED SPACING**

DIGITAL INK-JET TILE YES 15% NO 50%

IMPORTANT: Please note that fixing in a 50% staggered configuration is not recommended. We suggest the following fixing configurations for these ceramic materials.

HF HAPPY FLOORS
www.happy-floors.com

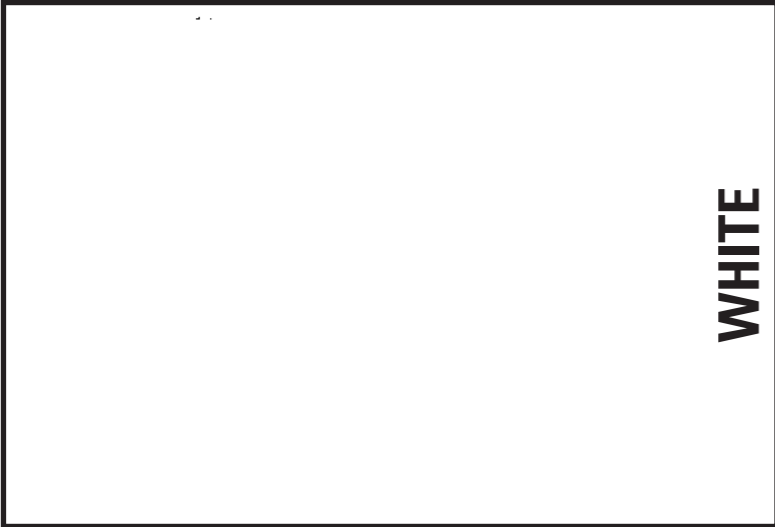
I-Design
Collection



APOLLO
FULL BODY PORCELAIN



BEIGE



WHITE



GREY



12"x24" Rectified Edge



Mosaic 2x2 (12"x12" Sheet)

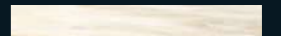
APOLLO BEIGE



24"x24" Rectified Edge



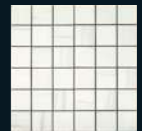
18"x36" Rectified Edge



Bullnose 3,2"x24"



12"x24" Rectified Edge

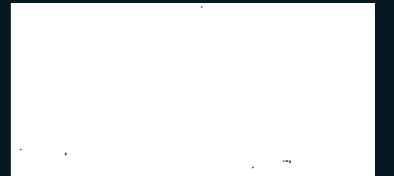


Mosaic 2x2 (12"x12" Sheet)

APOLLO WHITE



24"x24" Rectified Edge



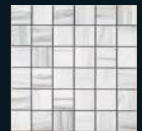
18"x36" Rectified Edge



Bullnose 3,2"x24"



12"x24" Rectified Edge



Mosaic 2x2 (12"x12" Sheet)

APOLLO GREY



24"x24" Rectified Edge



18"x36" Rectified Edge



Bullnose 3,2"x24"