

Model: MINNESOTA ASH 23X150(A)

Codes: 100339701

Water absorption: Bla - Porcelánico ($E \leq 0.1\%$)

Finish: Glazed / Standard

Tone variations: V3

Rectified: Yes







DIMENSIONAL FEATURES

 UNE-EN ISO 10545-2

Thickness	11 mm	+/-5%*
Width	230 mm	
Length	1500 mm	
Length and width deviation	Below 0.15%	+/-0.3%*
Side straightness deviation	Below 0.15%	+/-0.3%*
Squareness deviation	Below 0.15%	+/-0.3%*
Surface flatness deviation	Below 0.15%	+/-0.4%*

*ISO-13006:2018 UNE-EN 14411:2016

FEATURES

-  Natural-looking, non-glossy surface finish.
-  General deshaded design with a degree of color and appearance variation.
-  Name given to the finish of those tiles dimensionally improved after the firing process.
-  Installation on floor

MECHANICAL FEATURES

 UNE-EN ISO 10545-4-6-7-11

Breaking strength	3396 N	>1300N*
Modulus of rupture	51 N/mm ²	>=35N/mm ² *
Abrasion resistance	3	
Crazing resistance	Resists 3 cycles	
Resistance to thermal shock	RESISTE	

*ISO-13006:2018 UNE-EN 14411:2016

HYGIENIC FEATURES

 UNE-EN ISO 10545-13-14:1995

Chemical resistance	Class "A" for swimming pools and cleaning products (resists attack). Minimum Class "B" for acids and bases	B Min.*
Stain resistance	Class 5. Easy cleaning with water	3 Min.*

*ISO-13006:2018 UNE-EN 14411:2016

ANTI-SLIP VALUE

 EN 16165: 2022 / ANSI 137

Dynamic coefficient of friction (dcof)	0.76 (T-3C2)	
Slip resistance (wet pendulum) trrl	CL1	
Pendulum test value (ptv) 4s	WET 34 / DRY 62 (T-3C2)	

*ISO-13006:2018 UNE-EN 14411:2016

System Certification



Do not use cleaning agents containing hydrofluoric acid.

It is recommended to fix tiles with a minimum joint of 1,5 mm. Do not fix without joint.

For big sizes, it is recommended to fix with mortars containing polymeric additives and to use the double gluing technique.

Mosaic tiles must be grouted.

**See point 4 of supporting document DB/SUA 3. This material can be installed in dry public areas with a slope of less than 6% (it achieves the same scope of use as a class 1 according to the wet pendulum test).

PACKING

Sales units per box	1.724971 M2/BOX	
Sales units per pallet	41.399296 M2/PAL	
Sales units per unit	0.344994 M2/PIECE	

SCOPE OF USE

Technical code-1	5 - Use on medium traffic floors	
------------------	----------------------------------	--

System Certification



Do not use cleaning agents containing hydrofluoric acid.

It is recommended to fix tiles with a minimum joint of 1,5 mm. Do not fix without joint.

For big sizes, it is recommended to fix with mortars containing polymeric additives and to use the double glueing technique.

Mosaic tiles must be grouted.

**See point 4 of supporting document DB/SUA 3. This material can be installed in dry public areas with a slope of less than 6% (it achieves the same scope of use as a class 1 according to the wet pendulum test).

RECOMMENDED USE LOCATIONS

Single-family dwelling

Outdoor Premises: Porches, verandah, terrace, outdoor access or circulation area

Indoor Premises - Dry: Entrance and other enclosures with direct opening to the outside (garden, terrace, storage room).

Indoor Premises - Dry: Individual staircase

Indoor Premises - Wet: Kitchen, mini kitchen in living area, laundry room

Indoor Premises - Humid: Bathroom or Toilet

Collective housing

Outdoor premises: Balconies, terraces, galleries (not accessible from the outside)

Indoor Premises - Common Elements: Entrance Hall (less than 15 dwellings)

Indoor Premises - Common Elements: Stairs and corridors with or without lifts

Indoor Premises - Common Elements: Meter centralisation room

Indoor Premises - Common Elements: Storage rooms for children's cars, bicycles, etc.

Indoor Premises - Dwelling - Damp: Kitchen, mini kitchen and living area, laundry room

Indoor Premises - Dwelling - Damp: Bathrooms or shower rooms

Public Residential

Single or double rooms

Group rooms

Intensive use dormitories in residences, schools, etc.

Administrative

Office with workstation

Collective office, open plan office

Meeting/conference room, shops and retail (sales area)

Shops, warehouses with average public attendance (sales area)

Commercial

Shops and retail trade (Sales area)

Shops, warehouses with average public attendance (sales area)

Teacher

Pre-school and Primary: Classroom without direct opening to the exterior

Infant and Primary: Playroom, exercise, multi-purpose room without direct opening to the outside.

Secondary, Baccalaureate and University: Classroom without direct opening to the outside.

Secondary, Baccalaureate and University: Multi-purpose classroom, meetings

Secondary, Baccalaureate and University: Other laboratories (physics, electricity, radiation, mechanics).

Sanitary

Single-user room, isolation room

Collective room

Major and minor operating theatres. Operating theatres

Radiological premises

Rehabilitation, massage, therapy and rehabilitation centres

Laboratories (no public access)

Public attendance

Catering: Dining room restaurant, bar, cafeteria (medium use)

Catering: Dining room, company cafeteria

Libraries and reading rooms: Libraries, reading rooms, houses of worship, museums (Internal use)

Common transit areas

Indoor premises: Corridors and common areas with average traffic

Service, facilities

Toilets in office areas, restricted use

Sanitary premises special hygiene (hospitals, food)

Premises for telephone, computer and other dry installations

Re-printing service, copies of plans, photography

Archive and storage premises

System Certification



Do not use cleaning agents containing hydrofluoric acid.

It is recommended to fix tiles with a minimum joint of 1,5 mm. Do not fix without joint.

For big sizes, it is recommended to fix with mortars containing polymeric additives and to use the double glueing technique.

Mosaic tiles must be grouted.

**See point 4 of supporting document DB/SUA 3. This material can be installed in dry public areas with a slope of less than 6% (it achieves the same scope of use as a class 1 according to the wet pendulum test).