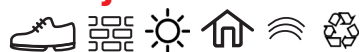




Novojunta ASTRA®



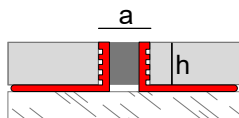
Profile for expansion joints made of our exclusive material ASTRA®, an extra resistant polymer and a central flexible body made of EPDM. It is an ideal solution for exteriors with the possibility of bending, which multiplies its installation possibilities.

The different combinations of colors of Novojunta ASTRA®, fit with the latest trends and make it suitable to be installed in any environment. Novojunta ASTRA® absorbs the movements of the flooring, helping to prevent cracks and damage without losing sight of its integration into the ceramic system thanks to its trendy colors.

Applications

Novojunta ASTRA® is a solution for expansion joints whose main function is to absorb expansion and contraction movements proceeding from floorings or tiled walls to avoid the apparition of pathologies. It can be installed vertically and horizontally in floorings or tiled walls.

General Features



Material: ASTRA® + technical rubber

Length: 8ft2in / 2,5 l.m.

Packaging: 30 u./box

Finishes:



Cinnamon - 163



Cement - 164



Black - 165



Almond - 168



Ash - 170

Dimensions:

h:	inches	3/8"	1/2"
	mm.	10	12
a₁:	inches	23/64"	
	mm.	9	
M.A.:	inches	-0.039" / +0.079"	
	mm.	+ 1 / - 2 mm.	
M.T.A:	inches	0.118"	
	mm.	3	

M.A: Movement allowed. M.T.A: Total movement allowed.

Technical Features and Tests

ASTRA®

Tensile strength	55-80 MN/m²
Flexural strength	50-100 MN/m²
Modulus of elasticity	3-4 GN/m²
Impact resistance	3-10 kJ/m²
Elongation to break	10-50%
Thermal dilat. coeff.	6x10 ⁻⁵ / °C

Moisture resistance	Excellent
Tensile strength	Excellent
Impact resistance	Very good
Appearance and color	Stable

Chemical resistance

- Ammonium chloride (household cleaner)
- Sodium hypochlorite (swimming pools)
- Hydrochloric acid low c. (3% v/v)
- Citric acid low c. (100 g/l)
- Potassium hydroxide low c. (30 g/l)
- Hydrochloric acid high c. (18% v/v)
- Lactic acid high c. (5% v/v)
- Potassium hydroxide high c. (100 g/l)

Partial immersion.
No visible effects in any of the samples.

UNE-EN-ISO 10545 Parte
13:2017



LABORATORIO CARPI



Water absorption	0,2 %	UNE-EN-ISO 10545-3
Frost resistance	No damage after 100 cycles	UNE-EN-ISO 10545-12
Stain resistance	In all cases, the stain has been removed with running hot water for 5 minutes	UNE-EN-ISO 10545-14

- Chromium oxide stain in light oil
- Alcoholic iodine solution stain
- Olive oil stain

Technical rubber

Hardness:	25-55	Shore 00
Density:	100-115 kg/cm³	
Elongation to break:	100-180 %	UNE 53510
Tensile strenght:	9,5 kg/cm3	
Water absorption:	<= 1	ASTM D1056 - 00
Outdoor resistance:	Very good	

Materials

ASTRA®

The Emac®'s Astra® material is an extra resistant polymer specially developed to obtain the best benefits in all kind of environments. Not only indoors but also in submerged or humid environments or outdoors. Thanks to the addition of biocides, which prevent from mold growing, it stands stable in humid and submerged environments. This material has a great impact resistance, improved in the formulation with several additives and a perfect balance of mineral reinforcer, which allows its use in floorings with guarantees.

The colors available are stable and durable, thanks to the studied dosage of maximum solidity dyes, preserving its appearance along the time. Astra® is the result of the constant innovation in Emac®, always working to offer highly functional and decorative products.

Technical rubber

The central flexible body of Novojunta ASTRA® is made of high quality EPDM rubber. EPDM is an elastomer polymer with excellent mechanical properties. It has good resistance to abrasion, wear and impact, is a good insulator, and resists weathering, common chemicals and has a wide working temperature range.

Its excellent compression set is the main feature in absorbing the deformations and geometric variations of constructive elements.

Tips of installation

Emac®, in his awareness for the correct execution of the ceramic systems, took part in the committee for the elaboration of the UNE 138002: 2017 standard "General rules for the execution of ceramic tile systems by adhesion". In that UNE standard the recommendations of installation for expansion joints were defined as follow:

Installation	Separation distance / Area	Joint width (mm)
<i>Linear expansion joints</i>		
<i>Outdoor walls</i>	Each 3 - 4 ml max. Regular areas max. 16 m²	>= 8 mm
<i>Outdoor floors</i>	Each 2,5 - 5 ml max. Regular areas max. 16 m²	
<i>Indoor floors</i>	Respect open contraction joints Each 8 ml maximum Regular areas max. 40 m²	>= 5 mm
<i>Singular points</i>	Door treshold Floor changes	>= 8 mm

Perimeter expansion joints		
Indoor walls	Perimeter joints Wall / Ceiling Wall / Wall	≥ 5 mm ≥ 8 mm
Outdoor walls	Indoor / outdoor edges	≥ 8 mm
Indoor floors	Perimeter joints and encounters with elements	
Outdoor floors	Perimeter joints and encounters with elements	
Singular points	Encounter joints with joinery	≥ 5 mm

Calculation of thermal variation

Novojunta ASTRA® has an excellent performance against contractions and expansions in ceramic installation and performs well when is under thermal variations. To calculate the allowed thermal variation we have the following data:

a	Mov. expansion / contraction	Total movement
9 mm.	+ 2 mm. / - 1 mm.	3 mm.
¹ Thermal variation calculated considering an outdoor installation with coefficient of thermal expansion 0.007mm*°C/m. with the joints placed to a maximum distance of 16.40ft (5 l.m.).	¹ The considered installation allows an expansion movement equal to an increase of 125.6°F (52°C) counting from the temperature of installation and a contraction equal to -61.6°F(- 52°C) counting from the temperature of installation. Total thermal variation: 219.2°F / 104°C	
¹ Thermal variation calculated considering an indoor installation with coefficient of thermal expansion 0.007mm*°C/m. with the joints placed to a maximum distance of 26.24ft (8 l.m.).	¹ The considered installation allows an expansion movement equal to an increase of 89.6°F (32°C) counting from the temperature of installation and a contraction equal to -25.6°F(-32°C) counting from the temperature of installation. Total thermal variation: 147.2°F / 64°C	

The correct calculation of this is highly important to distribute and dimension the expansion joints in a correct way. From our Technical Department, as specialists in expansion joints, we offer you advice for the calculation of the expansion joints in your project with no compromise.

Please, contact us in **tecnico@emac.es** and we'll offer you a customized solution depending on the features of your project.

Installation



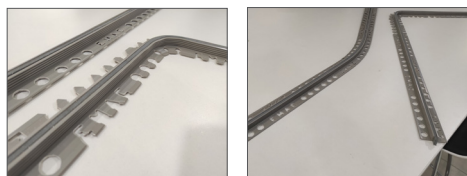
1. Spread a big amount of thin-set mortar on the surface to be tiled.
2. Then, place the profile and press it to let the thin-set mortar pass through the holes of the anchoring wing.
3. Place one tile on the anchoring wing and press it to get an optimal joint between the thin-set mortar and the profile.
4. Repeat the last step placing tiles along the profile (both sides) until the installation is finished. Before it cures, hit softly with a rubber hammer to align the profile with the tiles.
5. Finally, clean the leftover material, remove the protective film and let dry.

* If you're going to polish the flooring, install this profile slightly below the tile to avoid possible damage.

To view the video capture this image with your mobile (requires QR code reader software) or click on it.



If you wish, you can bend the profile by making cuts in the fastening wing or by applying controlled heat with a hot air gun, as is done in other profiles such as [Novopeldaño ASTRA® Nori](#).



Cleaning and maintenance

Novojunta ASTRA® can be cleaned with a cloth or mop dampened with water or in a solution of neutral detergent 5%. The correct use of bleach, 10%, does not affect the material.

Do not use acid concentrated cleaners to clean the profile neither abrasive cleaning tools which could cause damage to the material. It is not recommended to install this profile in areas susceptible to oil or hydrocarbons spills because they could affect the EPDM rubber.

Technical information

You can find out more information about the technical features of Emac®'s products by downloading its Technical File in www.emac.es.

If you have any query, please contact our Technical Department in tecnico@emac.es.



EXTERIOR
OUTDOOR
ESTERNO



INTERIOR
INDOOR
INTERNO



PAREDES
WALLS
MURS
PARETI



PAVIMENTOS
FLOORING
PAVEMENTS
PAVIMENTI



CURVABLE
BENDABLE
COURBABLE
CURVABILE



RECYCLABLE
RECYCLABLE
RICICLABILE

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