

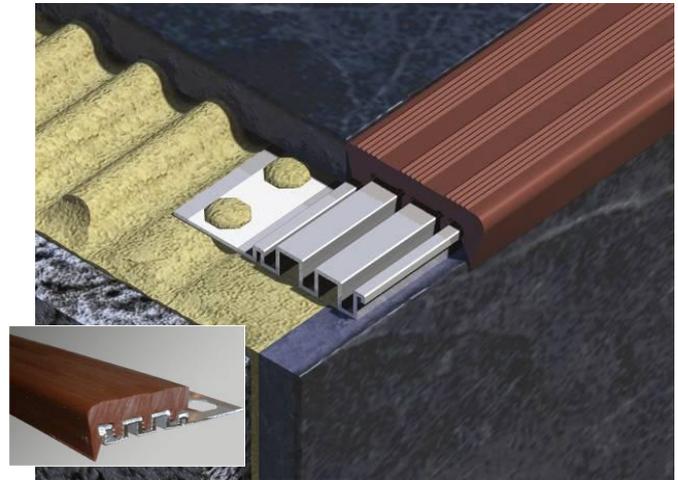
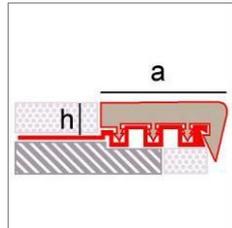
Novopeldaño[®] 1

h: 8, 10, 12⁵, 15, 25 mm

a: 35 mm

Length: 250 cm

Material: Aluminium + PVC
(With protector film)



NOVOPELDAÑO[®] 1

Novopeldaño[®] 1 profiles are the ideal to get a perfect stair nosing finish with any kind of pavement.

Novopeldaño[®] 1 consist in a nonslip footprint (thanks to stretch of its surface) of PVC and a solid base of Aluminium. The piece of PVC is perfectly assembled in the base, although its design allows exchanging it easily.

It is available in several colours.

Its positioning is very easy. The octagonal holes in the fixation wings allows the mortar, cement, glue or any adherence material to go through the profile in order to ensure an optimal installation and a long life.

TECHNICAL SPECIFICATIONS

ALUMINIUM

- Aluminium is, after iron, the metal more used in the world, and, very regularly, used in modern construction too, as it has many technical advantages.
- Aluminium used corresponds to the alloy 6063, according to the European Aluminium Association (Numerical designation L-3441/38-337, according to Spanish Standard UNE 38-301-89).
- Aluminium protects itself forming quickly a thin surface layer of aluminium oxide (Al_2O_3) when it to come into contact with the air. This layer is waterproof and stops

the process of oxidation, which provides durability and medium corrosion resistance. This layer can dissolve with citric acid forming aluminium citrate.

- It is a light material, flexible and very resistant material. Its specific mass is 2,70 g/cm³
- Fire resistance** classification as **A1** according to the current standard UNE EN 143501-1:2007. This classification corresponds to the class as **M0** according to NBE-CPI-96 (in accordance with the previous standard UNE 23727:1990), corresponding to a non-combustible material against the thermal action.

PVC

PVC used in Novopeldaño[®] 1 is flexible PVC.

- Is ductile and tough.
- It has a great dimensional stability and minimal water absorption <0'1%
- Is recyclable by several methods
- Has an high resistance to abrasion.
- Operating temperature: -10 to 60 ° C.
- Flexible PVC has a 50 Shore A toughness, a high resilience and a strong elastic limit that give it suitable properties for impacts and vibrations absorption.
- It is difficult that PVC catches fire and when it does, the flame gets extinguished by itself when separated of the test tube. The fire resistant coefficient of the set is **M2** according to NBE-CPI-96 classification, which means it's moderately flammable.

FIRE REACTION CLASSIFICATION

The behaviour toward fire is classified as **M2**, in accordance with the NBE-CPI-96 classification, corresponding to a moderately flammable material.

CHEMICAL AGENTS RESISTANCE TESTS

The Emac[®]'s Novopeldaño[®] 1 has been tested by the Plastical Technologique Institute AIMPLAS to determine the PVC's resistance to different chemical agents.



The results confirm that the PVC used resists to many chemical agents. However, it's necessary to take some precautions with products like chromic acid, nitric or sulfuric an organic solvent like acetate, ethyl, acetone, toluene because the aspect its aspect could be negatively deteriorated.

SLIP RESISTANCE TEST

Novopeldaño[®] 1 of Emac[®] has been subjected to slip resistance tests by Technological Institute of Construction AIDICO according to the Building Technical Code (CTE).

These tests confirmed the improved of the anti-slip degree (Rd) in groups formed with Novopeldaño[®] and tiles with different degrees of Rd.



ENTIDAD ASOCIADA A:

AIDICO
INSTITUTO TECNOLÓGICO
DE LA CONSTRUCCIÓN



CHARACTERIZATION OF THE SLIP RESISTANCE

Rules

Ceramic tiles are subject to the requirement of the Basic Document DB-SU, Safety in use, SU1: Security against the risk of falls, belonging to the Technical Building Code (CTE).

The CTE was approved by Royal Decree 214/2006, published in the Spanish Official Gazette (BOE) on March 28, 2006 and amended by Royal Decree 137/2007 on October 19, 2007, published in the BOE on October 23, 2007.

Objeto

The object of the basic requirement "Safety in use" is to reduce, to acceptable levels, the risk for users of a building to suffer damaged during its foreseen use, because of the nature of their design, construction, use and maintenance.

Scope application

The conditions established by the DB-SU 1 apply floor building or area of use:

- Health: clinics, hospitals, health centers ...
- Teacher: universities, colleges, schools ...
- Commercial: markets, shopping malls, supermarkets, shops...
- Administrative offices, banks...
- Parkings
- Public use: Cultural building or establishment, (restaurants, shows, meeting, enjoyment, sport halls, gambling and similar), religious and passenger transport.

The *Restricted Use Areas* are excluded from these demands (Use zones or circulation elements limited to a maximum of 10 people who have the character of regular users, including inside homes, but excluding common areas of buildings housing).

DB-SU 1: Security opposite the risk of fall demands limiting the risk that users have a fall, for which the floor should be suitable to favor people not slipping, tripping or limits its mobility.

The CTE does not expressly include the areas of Housing Residential Use and Public Residential Use, so these cases are under the demands of regulatory authorities, whether regional or municipals. In most cases the territorial regulations includes the areas of residential use in the scope of the CTE.

Housing Residential Use

Building or area for permanent accommodation, whatever the type of building: Single family housing, apartment building or flats, etc.

Public Residential Use

Building or facility designed to provide temporary accommodation, run by a titular of the activity different of the occupants group and can provide common services such as cleaning, dining, laundry, meeting facilities and entertainment, sports, etc.. Includes hotels, hostels, guest houses, pensions, apartments, etc...

Floor classification according to their slip

Slip resistance (Rd)	Type
$Rd \leq 15$	0
$15 < Rd \leq 35$	1
$35 < Rd \leq 45$	2
$Rd > 45$	3

Minimum type demanded in stairs and surfaces with slopes greater than 6 % by location.

Location	Type
Dry interior areas	2
Wet interior areas, such as building entrances from outer space (1), covered terraces, changing rooms, showers, bathrooms, aseos, cocinas, etc...	3
Interior areas where, in addition to, may be agents (fats, oils, etc..) to reduce slip resistance, such as industrial kitchens, abattoirs, car parks, industrial zones, etc..	3
Exterior areas. Swimming pools (2)	3

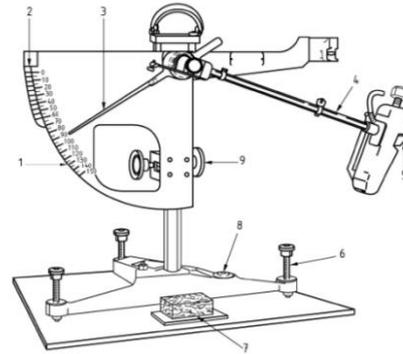
(1) Except in the case of access to restricted use zones.

(2) In areas predicted for users barefooted and in the bottom of basin pool, in areas where the depth does not exceed 1.5 m.

Test standard

The value of slip resistance is determined by the pendulum test, described in Annex A of the UNE-ENV 12633:2003 standard, using the C scale on test pieces without accelerated wear.

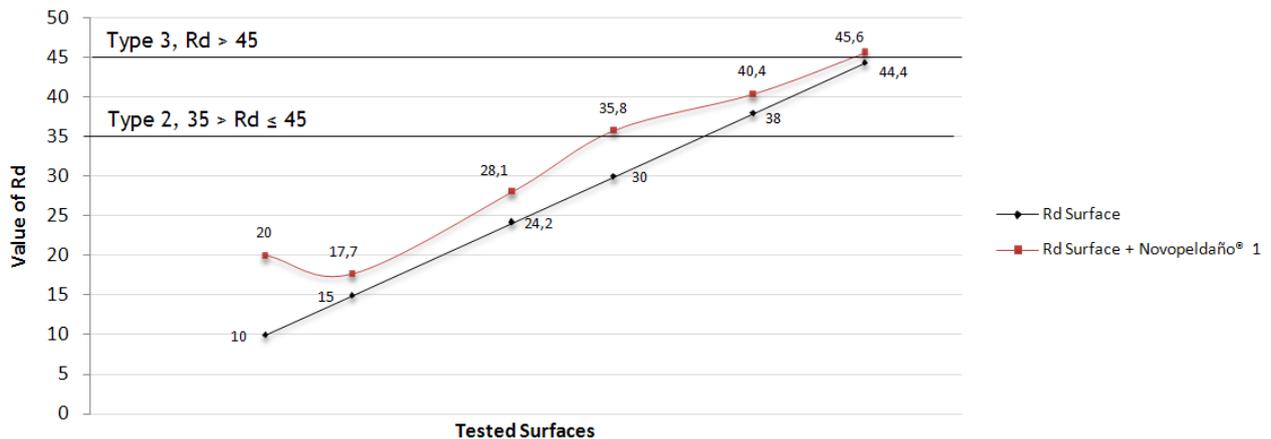
The Novopeldaño[®] 1 characterization was performed using the same procedure by which it is determinate, according to the CTE, the slip resistance of ceramic tiles, always taking as representative that one with the most unfavorable slip conditions.



Data obtained

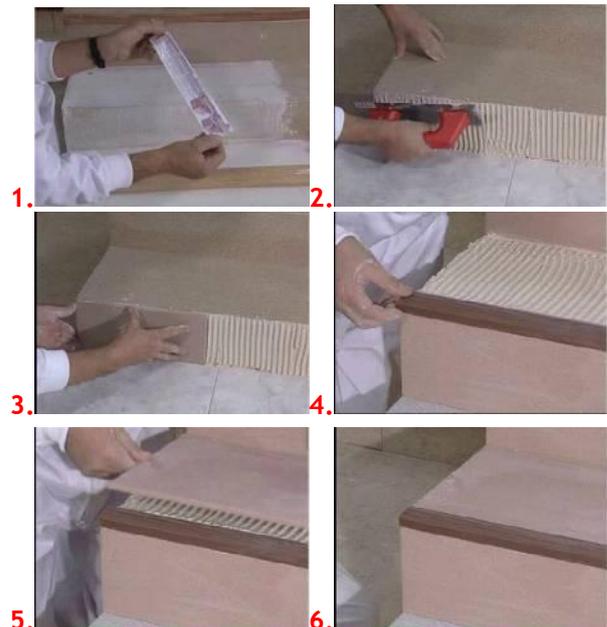
All tested surfaces together Novopeldaño[®] 1 improves its Rd value, obtaining a better slip resistance. It even includes the surface in a superior class as you can observe on the following graph:

Slip performance Novopeldaño[®] 1



PLACEMENT

1. Read carefully the instructions labeled on the profile.
2. Extend abundant material grip on the stair pan where we will place the profile. Put the pavement in the riser.
3. Then, align the profile on the step's vertex, resting on the riser, not to leave the profile without support. Push the profile to ensure the perfect fixing, making sure that the material grip pass through the die, for that purpose.
4. Then put the pavement on the wing fixing.
5. Clean carefully in order to take off any glue or material grip.



CLEANING AND MAINTENANCE RECOMMENDATIONS

Cleaning the profile just after its placement is essential to avoid some aspects losses. Indeed, corrosion could be produced by rests of mortar, cement or iron particles of tools.

Most of the cleaning products can be used with PVC thanks to its high resistance and chemical inertia.

For more information about products that can affect PVC, read the results table of the tests

Products to avoid

The natural oxide layer formed on the aluminium to protect it from the corrosion, can be dissolved with citric acid. So products with citric acid have to be avoided.

Aluminium reacts as well when facing ions Cu⁺² y Cl⁻ (the protection disappears and it becomes reactive).

Do not use curing accelerators with chloride. If you are about to manipulate aluminium profile, be sure that those accelerators do not have chlorite because it could lead to the material oxidation and so stains of corrosion. There are on the markets free chlorites solutions for this specific use.

carried out by AIMPLAS on the PVC's specification sheet.

The correct use of bleach does not affect the PVC.

Exterior exposure of Aluminium can have a bad effect on its esthetical appearance. Its placement in marine or very aggressive environment is not recommended.

Do not use products that are abrasive or contain hydrochloric acid for cleaning. It is hardly non recommendable to use bleach or cleaning solution due to chloride presence.

Aluminium has amphoteric features. That means it can be dissolved in strong acids and (for example chlorhydric acid (HCl) or acid percloric) strong bases (like caustic soda (NaOH), potash (KOH) or ammonia (NH₃); that is why their use is not recommended.

Aluminium can be affected as well by the contact with solvents containing halogen-alkenes (hydrofluoroethers (HFEs), chlorinated solvents (trichloroethylene), and so on.).

TECHNICAL INFORMATION



You can find more information about the technical characteristics of the material the

Novopeldaño[®] 1 is made of downloading its specification sheet on www.emac.es

If you have any question, do not hesitate to contact the technical office: otecnica@emac.es.