

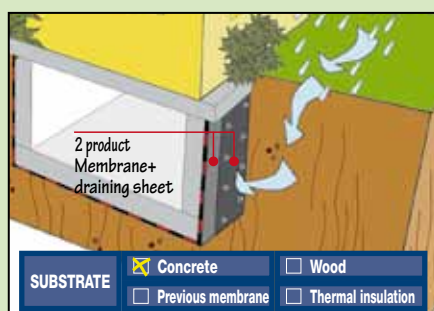


ARMODILLO POLIESTERE ARMODILLO POLIESTERE ANTIRADICE

A SPECIAL WATERPROOFING, MULTI-FUNCTIONAL POLYMER-BITUMEN MEMBRANE. IT IS ELASTOPLASTOMERIC, REINFORCED AND PROTECTIVE FOR WATERPROOFING AGAINST THE GROUND FOUNDATION WALLS

CATEGORY	CHARACTERISTICS			ENVIRONMENTAL						METHOD OF USE			
SPECIAL ELASTOPLASTOMERIC FOR SPECIFIC USES	WATERPROOF	DRAINING	REACTION TO FIRE	ECO GREEN	ASBESTOS FREE	TAR FREE	CHLORINE FREE	RECYCLABLE	NON DANGEROUS WASTE	EXHAUSTED OIL FREE	TORCH APPLICATION	HOT AIR APPLICATIONS	NAILINGS

1 PROBLEM



HOW TO WATERPROOF, DRAIN AND PROTECT FOUNDATION WALLS WITH ONE PRODUCT

The waterproofing cover is often damaged during burying operations.

2 SOLUTION



ARMODILLO is the Index membrane with integrated functions for protecting and draining the waterproofing system and solves the problems of waterproofing, mechanical protection and drainage with one single product.

ARMODILLO is a membrane manufactured from a "phase inversion" compound containing distilled bitumen, selected for industrial use, with a high content of elastomeric and plastomeric polymers where the polymers, in which the bitumen is dispersed, form the most consistent ingredient. The membrane is reinforced with puncture and tear resistant non-woven polyester fabric with a high ultimate elongation value.

The upper face of the membrane is armoured with resistant and elastic polymer-bitumen plates that protect the membrane from perforation when it is being buried and at the same time form an efficient drainage network which allows any water to quickly drain to the perimeter drains, stopping dangerous pooling. If the plates are torched they become adhesive making it possible to bond insulating panels, non-woven fabrics and other materials on the membrane.

ARMODILLO makes bonding the membrane to

foundation walls without getting burnt easy. When laying a smooth membrane on vertical surfaces the installer can burn his hands while holding the roll, but the bubbles on **ARMODILLO** keep the installer's hands away from the torch making installation much easier and safer.

The membrane is also an excellent vapour and gas barrier and if it is installed on the hot face of an insulating layer it can be used as a vapour barrier on which the insulation can be torch bonded without having to use bitumen or nails. The side strip is without indentations to bond overlaps. The underside of the membrane is coated with Flamina, a plastic film that melts when torched.

APPLICATION FIELDS

ARMODILLO POLIESTERE can be used on both flat and vertical parts of a building, either alone or with other membranes as a protective and draining layer. The special configuration of the upper face, similar to the plates of an Armadillo's shell, from where the name of the membrane comes, protects the membrane while it is being laid underground. Below you will find the main fields of use for **ARMODILLO POLYESTER** for which four stratigraphic systems have been planned:

- **DRY-OUT:** for waterproofing and draining foundation walls.
- **DRY-IN:** for the hygienic refurbishment of damp cellars.

METHOD OF USE AND PRECAUTIONS

ARMODILLO is normally hot bonded to the foundation walls, but it can also be nailed down although this will make the membrane more prone



INTENDED USE OF "CE" MARKING SPECIFIED ACCORDING TO THE AISPEC-MBP GUIDELINES

EN 13969 - BITUMEN DAMP PROOF SHEET INCLUDING BITUMEN BASEMENT TANKING SHEETS

- **Membranes for foundations**
 - ARMODILLO POLYESTER 5 kg/m²
 - ARMODILLO POLYESTER ANTIRROOTS 5 kg/m²

to tearing when it is covered with earth and when the earth settles.

ADVANTAGES

- A waterproofing, protective and draining layer in one multifunctional product.
- The protective plates are heat-adhesive when torched so, with no additional costs for adhesives, you can bond other materials that won't move during refilling.
- Multifunctional waterproofing and draining membrane: foundation walls, cellars, roof gardens, underfloor.
- The insulated rustications protect the hands of the installer from burns.
- It resists to puncturing more than HDPE products

“DRY-OUT” SYSTEM

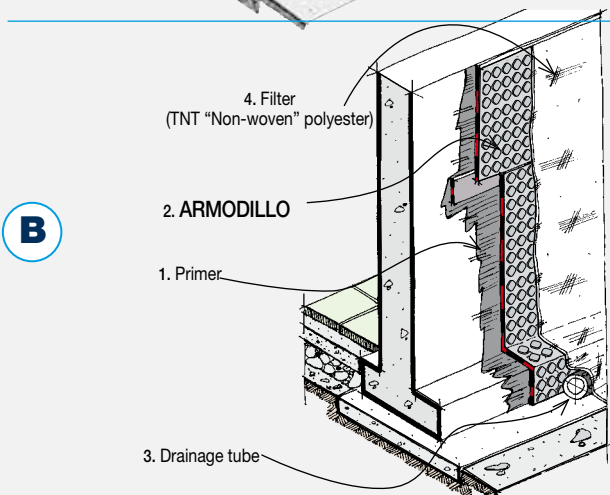
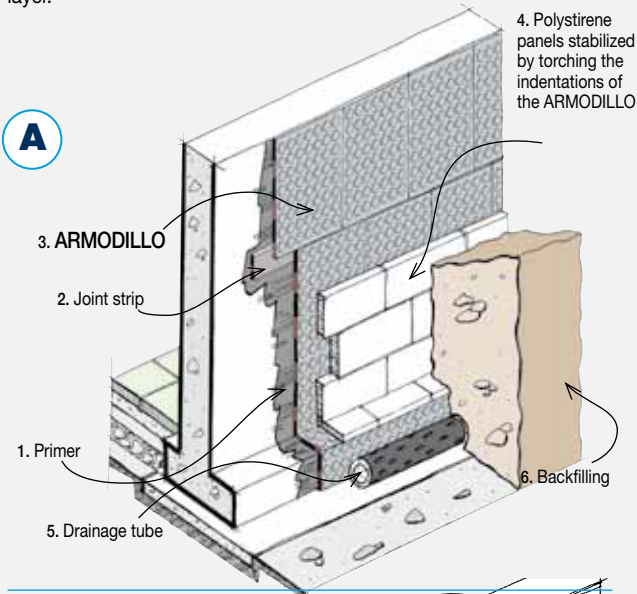
This is the Index system for waterproofing and draining the outer face of underground walls. It consists of the combination of the following products:

- **ARMODILLO POLYESTER**
- **EXPANDED POLYSTYRENE** or **FILTRO/P** panels

The first is an indentated membrane to be fully bonded to the wall to be covered, with the rusticated face outwards. The sheets should be overlapped and bonded laterally along the overlaps of the membrane, while joints at the head of the sheets will be sealed by bonding the head of the membrane to a 14 cm strip of reinforced polyester membrane which has previously been bonded along the wall. The difficult parts and joints will be realised with a smooth membrane belonging to TESTUDO line. The covering will be protected with polystyrene panels fixed to the indentations of the **ARMODILLO**. You do not need to use nails or adhesives to fix the panels but simply torch the indentations on the **ARMODILLO** membrane and then press the polystyrene panel **A** onto the membrane. In this way, in a single operation a drainage air space is produced as well as an effective protective layer capable of resisting being laid underground and the tangential stress of the earth settling. Filtering non-woven fabric (Filtro) can be used instead of the polystyrene panels and this material captures the smallest particles of the earth which could block the drainage channels **B**.

Filtro can easily and quickly be fixed to the membrane by torching the armour plates and pressing the fabric onto the membrane.

ARMODILLO POLYESTER can also be used as a simple rusticated drainage sheet if it is installed with the indentations towards the surfaces to be covered, with the advantage that it can be fixed to the wall by torching the armour plates and will not move when it is covered with earth, as would happen with a normal plastic sheet nailed at the head. The overlaps can also be bonded and the head joints can be covered with a strip of membrane to form a continuous waterproof layer.



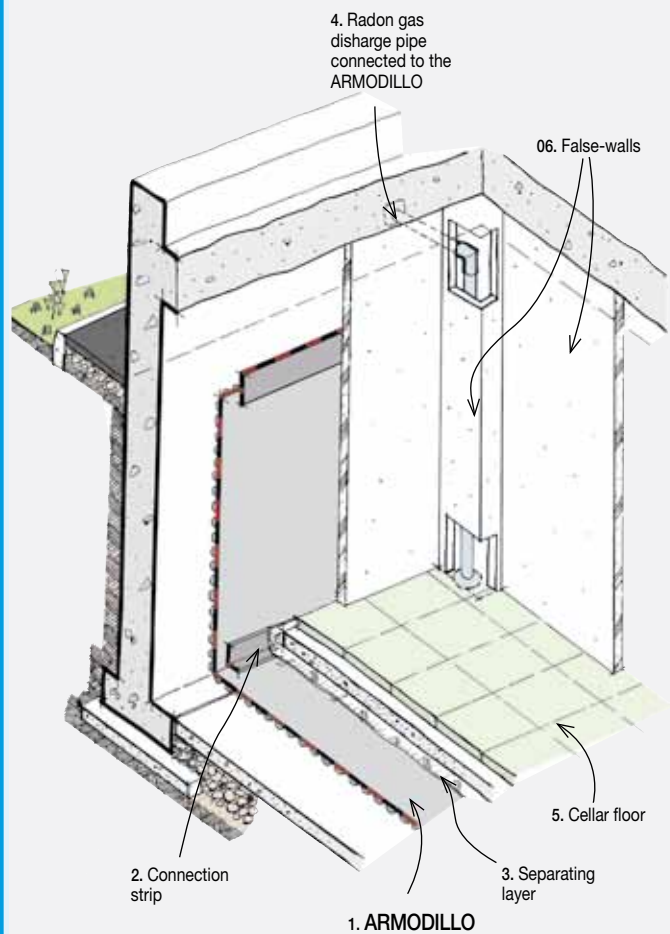
“DRY-IN” SYSTEM

This is the Index system for refurbishing damp cellars from the inside when it is impossible to work from the outside. This system consists in the installation of:

- **ARMODILLO**

with the rusticated face facing towards the surfaces to be covered. Torch the plates of the armoured face and fix the sheets on the walls, dry lay the membrane on the floor dry. The side overlaps on the membrane should be torch bonded, while the head of the sheets should touch but not overlap and then be sealed with 14 cm strips of reinforced polyester membrane bonded over the joints. The difficult parts and joints of pipes should be made with a smooth membrane belonging to TESTUDO line.

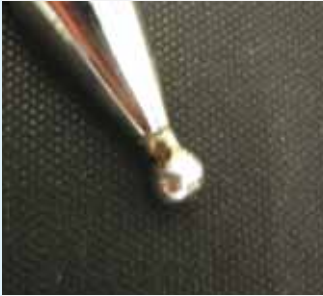
ARMODILLO is impermeable to water and gas, and as can be seen in the picture, a draining air space is formed between the damp surfaces and the membrane through which the humidity and any gas emissions from the ground, even radioactive ones, can drain. Then the waterproofing layer can be covered with traditional or prefabricated construction materials, both on the wall and floor.



RESISTANCE TEST

STATIC LOADING

Subjected to static and dynamic puncture tests conform to UNI8202 methods: with a 0.45 mm thick embossed HDPE drainage sheet, ARMODILLO resists for 7 days without being punctured under a load with a maximum diameter of 10 mm.



ARMODILLO PASSES THE TEST

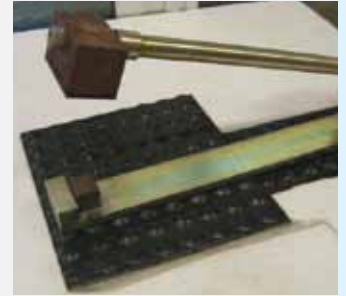


INDENTATED HDPE FOIL PASSES THE TEST

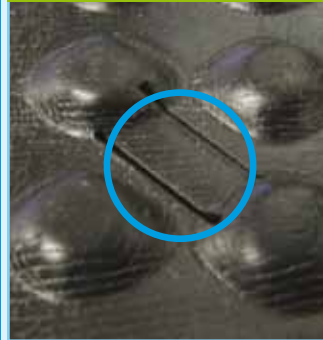


DYNAMIC IMPACT

Subjected to static puncturing by a 1kg hammer that drops from 50cm onto a two-bladed punch resting on the membrane. A 0.45mm thick embossed HDPE drainage sheet is perforated. ARMODILLO, which is thick and resistant, is marked but not punctured, remaining waterproof.



ARMODILLO PASSES THE TEST



INDENTATED HDPE FOIL DOES NOT PASSES THE TEST



REFERENCES



Residential villas - Donoratico (Livorno)



"Autovip" Car dealer - Campagna (Salerno)



"Parrot" Building - Treviso

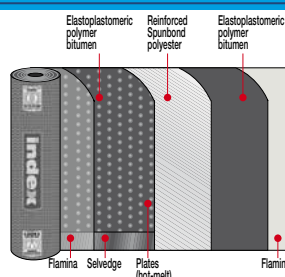
TECHNICAL CHARACTERISTICS

	T	ARMODILLO POLYESTER
Weight (EN 1849-1)	±10%	5 kg/m ²
Roll size (EN 1848-1)	≥	1x7,5 m
Reinforced		"Non-woven" Spunbond polyester
Watertightness (EN 1928 - B method)	≈	60 kPa
• after ageing (EN 1296-1928)	≈	60 kPa
Shear resistance (EN12317-1)	~20%	500/300 N/50 mm
Maximum tensile force Long./Trasv. (EN 12311-1)	~20%	600/400 N/50 mm
Elongation (EN 12311-1)	~15 V.A.	35/40%
Resistance to impact (EN 12691 - A method)		1.250 mm
Resistance to static loading (EN 12730 - B method)		25 kg
Resistance to tearing (nail shank) (EN 12310-1)	~30%	170/170 N
Flexibility to low temp. (EN 1109)	≤	NPD
Reaction to fire class (EN 13501-1)		Euroclass E

In compliance with EN 13707 as the water vapour transmission factor, for reinforced polymer bitumen membranes, the value of 20.000 µ may be assumed.

MEMBRANE COMPOSITION

ARMODILLO POLYESTER



PRODUCT FINISH



FLAMINA. Plastic protection film helping prevent coils from sticking to the roll. As it withdraws under the action of the flame right during its installation, it signals the best melting point in order to correctly glue the membrane to the brackets and rises. When not heated, it can be used as a sliding layer.



INDENTED FLAMINA

• FOR ANY FURTHER INFORMATION OR ADVICE ON PARTICULAR APPLICATIONS, CONTACT OUR TECHNICAL OFFICE • IN ORDER TO CORRECTLY USE OUR PRODUCTS, REFER TO INDEX TECHNICAL SPECIFICATIONS •

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Construction Systems and Products

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