

RC-41 PLAST-1 DATA SHEET

Mineral Waterproofing

One-component plasto-cementitious sheath

DESCRIPTION:

Plast-1 is a single-component mixture, to create a waterproofing and water-repellent layer, walkable. It comes in white or colored color. It represents an innovative response to the waterproofing problems present on all structures, guaranteeing waterproofing over time, water repellency and adhesion to the substrate.

From performance measured on site, the product has infrared heat-reflecting properties, allowing the temperature of the substrate to be reduced by about 20% (White product).



FUNCTIONALITY: The Plast-1 product combines waterproofing and infrared thermo-reflectance performance, with levelling properties, particularly suitable in the event of irregularities and imperfections on the surfaces to be treated. The thickness applied, although extremely thin (3 mm), is able to drastically reduce overheating from radiation by reducing the internal/external thermal shock.

The composition, formulated with lime, makes Plat-1 a natural waterproof and long-lasting protection, applicable on any type of surface (concrete, tiles, tiles, screeds, etc.). The applied mixture does not absorb heat, lowering the thermal conductance value. It also makes the substrates particularly resistant to corrosion, prevents the formation of fungi and mold, allows significant energy savings and a significant improvement in the quality of life.

FIELDS OF USE: Waterproofing of structures against the ground and flat to be paved or walls; for waterproofing applications of balconies, terraces, before laying ceramic coverings; walkable waterproofing of existing terraces and balconies, including micro-cracks; Flexible coating of plasters, screeds, concrete surfaces and prefabricated structures.

COMPOSITION: Mixture based on white portland cement binder, aluminous cement, lightened aggregates, ceramic microspheres, mineral and quartz aggregates with fine and controlled grain size, synthetic microfibers and polymer resins.

MEDIA:

- Cementitious screeds, including self-levelling.
- Cement or seasoned cementitious plasters.
- Cementitious plasters.
- Overlay on existing floors.

DO NOT APPLY ON:

- Thicknesses greater than 2 mm per coat.
- Dusty, inconsistent, degraded surfaces, with efflorescence or traces of disarming oil.
- Surfaces in the presence of standing water.
- Supports other than those indicated.

ADVANTAGES:

- Good machinability;
- It features an innovative white portland cement and aluminous cement binder for an improvement in the durability and stability of the mixture, for the restoration of degraded structures;
- Excellent adhesion to the most commonly used substrates in construction (concrete, stone, brick, steel, wood);
- Good dimensional stability with very low hygrometric shrinkage;
- Good mechanical resistance to compression, bending and tension;
- Deformable;
- Good workability even overhead, without detachment or bleeding.

APPLICATION:

PREPARATION OF THE SUBSTRATES: The substrate must be healthy, cohesive, clean of dust and any inconsistent or detached parts. Regularize all roughness that can cause difficulties in application and variations in thickness that are too strong. The substrate must also be cleaned of efflorescence, traces of disarming oils and rust.

Demolishment and restoration of deteriorated parts. If the surfaces to be covered are particularly absorbent, moisten with water beforehand. After application, in particularly dry, hot or ventilated climates, it is advisable to protect the surface from rapid evaporation with damp cloths or shade.

MIXING AND LAYING: Knead Plast-1 with 5.75 ÷ 6 litres of clean water per 25 kg bag (24 %). Mix with a drill at low speed (120/300 rpm) until a homogeneous and fluid mixture is obtained, avoiding the incorporation of air into the mixture. Apply with a spatula in a maximum thickness of 2 mm per layer. On an area larger than 5 square meters and in correspondence with cracks or on particularly deformable structures, insert a fiberglass or synthetic mesh with a square mesh (e.g.: 4x4 mm) in the thickness of Plast-1. In correspondence with expansion joints, wall-to-wall and wall-floor fittings, pipes and drains in bathrooms, shower cubicles, apply the rubberized fabric band on a product that is still fresh. Apply the second coat to harden the first coat (about 6 / 10 hours) the maturation of the product during drying, possibly by spraying water spray on its surface. Can be covered after at least 4 days.

PRODUCT DATA

Appearance/Color	Powder Aged White	Thermal conductivity of the microbeads used	0.044 W/m ² K
Chemical base Plast1 (White)	White portland cement, Cem. White alumina, Polymer resins.	Grain size	/ max: 0.5 mm
Specific weight of the dough	1.5 ± 0.1 kg/L	Consumption	~ 1.5 kg/sqm per mm of thickness.
Resistance to bending	7 days ≥ 2 MPa 28 days ≥ 3 MPa	Resistance to compression	7 days ≥ 4 MPa 28 days ≥ 8 MPa
Content of chloride ions	0,012 %	adhesion	≥ 1 N/mm ²
Water resistance in push	: 1.5 ATM* (test waterproofing dopo 28 gg)	Water resistance in Counterthrust	1 ATM* (test waterproofing dopo 28 gg)
Ion input chloride	< 0.01 %	Hazardous substances (Chromium VI)	None (in white or colored version)
Capillary absorption	0.3 kg m-2 h-0.5	Reference	EN 14891:2012

*The data - technical values derive from laboratory tests in a conditioned environment and may be significantly modified by the conditions of installation.

SUMMER THERMAL PERFORMANCE:

Determination of thermal performance in summer phase shift and attenuation P.O.I. *			
Sample Applied in 3 mm thickness	Sfasamento U (ore):	Periodic thermal transmittance Y_{ie} (W/ m ² K)	Attenuation f_a (-)
Brick and concrete floor 30 cm thick	9 h	0.304	0.400
Floor as above + Plast-1 cycle of 3 mm on the external side	11h 15'	0.200	0.296
Performance Improvement summer thermal insulation	+ 23,5 %	+ 51 %	+ 35 %

* Performance in thermal enhancement is determined solely by the UV reflectance component

STORAGE: 12 months from the date of production, if stored correctly in the original intact sealed packaging, in a cool and dry environment.

APPLICATION NOTES/LIMITATIONS:

WARNINGS AND RECOMMENDATIONS Operating temperature: from +5°C to +30°C; In summer, mix with cold water; Do not apply in full sun on hot surfaces and in the presence of strong winds; Do not apply on frozen substrates, in the process of thawing, or with a risk of freezing in the following 24 hours.

Moisten the surfaces to be treated with water beforehand, if they are very absorbent Protect from rain in the first 24/48 hours after application.

Protect from direct sunlight if you work with high temperatures, before use keep the packages away from the sun; after use, it is advisable to wash work tools with water before the mortar sets; Do not add aggregates, latexes, or cement to the product.

SAFETY RULES: Precautions For information and advice on safety rules and for the use and storage of chemical products, it is recommended to refer to the most recent Safety Data Sheet, containing physical, toxicological and other related safety data. Your eyes and hands should be protected. In case of accidental contact with skin or eyes, wash thoroughly with water.

ECOLOGY: Do not disperse powdered product and empty containers into the environment.

LEGAL NOTICE: The technical advice relating to the use, which we provide verbally or in writing as assistance to the customer or the installer based on our experience, corresponding to the current state of scientific and practical knowledge, is not binding and does not demonstrate any contractual legal relationship or ancillary obligation with the contract of sale. They do not relieve the purchaser of their responsibility to personally test our products as to their suitability for their intended use. Otherwise, our terms and conditions apply. The content of this sheet is considered binding for the above for the purposes of the truthfulness of the content, only if accompanied by a special stamp and countersignature affixed to our headquarters and by personnel delegated to the above. Discrepancies from the aforementioned original in terms of content and/or use shall not imply any liability on the part of HERES. The customer is also required to verify that this sheet AND ANY VALUES REPORTED are valid for the batch of product of interest and are not outdated as they are replaced by subsequent editions AND/OR NEW FORMULATIONS OF THE PRODUCT. If in doubt, contact our Technical Department in advance.

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WATERPROOFING

SPECIFICATIONS: Waterproofing of masonry structures, including against the ground, balconies and terraces, (also paved), shower cubicles, and in general of absorbent and non-absorbent substrates, provided that they are stable and consistent by applying mineral waterproofing in a one-component fibre-reinforced plasto-cementitious sheath, with high flexibility, and with thermal thermo-reflectance properties, (such as Heres' Plast-1). The membrane can be covered directly with a coating or left exposed and walkable.