



LIME-BASED COATING WITH GRAPHENE



DATA SHEET

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Description

Graphenecal is a natural and ecological coating ready to apply, made from high purity lime modified with graphene nanoparticles, which in its natural carbonation process absorbs CO₂ and purifies the air.

Benefits

Graphenecal offers increased durability due to its resistance to weathering, UV radiation, humidity, and temperature changes. In addition, its excellent adhesion and impermeability makes the paint washable, but without affecting the breathability of lime paint. The breathability gives it the ability to regulate humidity in the room and because it does not contain chemical components, it is ideal for environments inhabited by people with chemical sensitivities, and the coating has a high antimicrobial capacity.

Features

- 100% natural coating. Environmentally friendly.
- High carbon dioxide absorption capacity (CO₂). *
- Excellent covering power.
- High resistance to weathering and UV rays.
- High resistance to ageing.
- Excellent abrasion resistance.
- Breathable and waterproof.
- Excellent adhesion.
- Washable.
- High antimicrobial protection. Prevents biofilm formation.
- Coating free of toxic compounds (VOCs).

* High carbon dioxide (CO₂) absorption capacity, absorbing 12-14 kg per year per 60 m².

Use

Interior and exterior building surfaces can be applied on natural building systems, buildings with historical value, decorative projects, and repainting. Matte finish with mottling (typical lime paint finish).



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Yield

The yield is 5-6 m²/Kg of paint with brush. In roller applications the performance is lower.

Physical properties

Natural coating, elaborated with high purity lime in paste form (calcium hydroxide) added with graphene, soap alum, nopal mucilage, water, and mineral pigments.

Parameter	Specifications
Density	1.20 -1.25 g/cm ³
pH	12-14
Viscosity	≥ 20,000 cp
% Solids	55 ± 5 %
Appearance	Dense liquid
Odour	Characteristic / Non-toxic
pH	13-14
Purity	92-96%
Finish	matte
Dusting (Dust release)	NO
Washability	Class 1*

* The classification may increase after 30 days of application, when the percentage of carbonation of the paint is higher than 80%.

Colors

Wide range of colours (ask for colour range)

Drying time

At ambient conditions of 25°C (77°F) and 50% relative humidity. Drying time is longer at lower temperatures and excess humidity.

- Touch 40 min
- To coat 2 - 3 h



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Presentation



Packing:
4 liters
19 liters
Matte finish

Material handling

Surface Preparation

Before application, the surface must be clean and dry, free of dust, grease, oil, rust, and any other contaminants.

Remove previous coatings or coatings in poor condition, completely removing all loose coating residues. Where deep cracks exist, it is recommended to first repair with lime-sand mortar before applying paint.

Ensure that the base to be painted is in optimum condition, this will give a better appearance of the colour.

Product preparation

Shake the coating before use, until the product is homogenized. The agitation time is longer in colors with high tonality.

Product Application

-Moisten the surface before application, especially in extreme temperatures (below 5°C or above 36°C).

-Apply with brush or roller uniformly (Use roller only on regular surfaces). Apply the product on the surface, first apply in one direction until perfectly covered. Allow to dry for two hours.

-Apply perpendicular to the first coat, forming a cross. Allow the material to dry.



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Recommendations

- The surface to be painted must be free of dust, grease, wax, and other contaminants and free of moisture.
- It is not recommended to apply on smooth surfaces or surfaces with little porosity.
- It is not recommended to apply over acrylic or vinyl-acrylic base paint.
- If there are deep cracks in the surface to be coated, it must first be repaired with mortar.
- Do not apply when rain is probable.
- The tone of the colors can vary from 3% to 5% since natural inputs and pigments are used. It can also vary according to the surface applied.
- It is not recommended to wash or rub before 30 days of application.

Warnings

- In case of ingestion, do not induce vomiting; rinse nose, mouth and throat and get medical attention.
- Keep out of reach of children.
- Avoid direct contact.



**ATTENTION, HARMFUL
IF SWALLOWED**

Safety precautions

- Non-toxic.
- In case of contact with eyes, rinse with plenty of water or consult a doctor.
- Consult the Technical Service if you have any doubts about the application of the product.
- The product may irritate the skin, so the use of personal protective equipment is recommended: gloves, safety goggles and protective suit.



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WEAR PROTECTIVE SUIT



USE GLOVES



USE GLASSES

Storage

Store in a cool, dry place, away from fire, avoid storing outdoors, and keep closed.

Waste management and environmental impact

Waste such as brushes, cheesecloth and other materials used to apply the product must be disposed together with the waste contaminated with chemical products generated during the product application.

Expiration

The product has NO shelf life if the container is kept hermetically sealed. Keep in original container. Store the product in a cool, dry place, protected from sunlight.

Legal Note

The information contained in this data sheet is provided in good faith and is valid only for the product to which reference is made.

The information is not intended to be exhaustive, and it is based on Cal de Alta Pureza S. DE R. L. DE C.V. and Energeia Fusion, S.A. de C.V., current knowledge, and experiences, if the product is properly stored, handled, and applied under normal conditions and in accordance with the recommendations expressed here.

It is advisable to carry out the pertinent tests with the product to determine its suitability before its final application. In case of changes in parameters of application or if it is planned to use for a different application, consult Energeia Fusion Technical Service.

Energeia Fusion, S.A de C.V. is not responsible for any damage that may be caused by misuse of the product.

For more information contact contact@graphenemex.com

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