

## FIELDS OF APPLICATION

A transparent decorative finish paint with made with a high quantity of lime putty, formulated for masonry or portland cement bases, for interior-exterior walls and surfaces, for sheetrock, wood, stone, brick, portland cement stucco, cementitious board, and NHL 3.5 and 5.0 stucco mortars. EcoCalce Glaze, known as Velatura Mineral (mineral veil), is a very refined, highly specialized lime wash paint that can be applied multiple surfaces to provide a transparent chalk paint finish with the ancient capabilities to carbonize to masonry surfaces providing decades of durability, withstanding most climatic conditions and not capitulate to environmental stress. EcoCalce Glaze has been formulated to form a slow set and permit high dilutions with water. This lime wash is ideal for application on lime paints BioCalce Classico, BioCalce A, EcoCalce S, BioCement GF and GM, BioMarmorino, smooth, semi-smooth, rough cement walls, exposed brick, and wood. This product is ideal for antique patinas, with transparent/opaque effects. This is an ancient lime paint product originating from the early Italian Renaissance. A non-acrylic paint product.

EcoCalce Glaze can be manipulated by water dilution and applied with glaze techniques or by brush.

This paint product is not oil proof, and can be damaged by foods, greases, body oils, color crayons or washable colored markers. Cleaning may damage or change the sheen of the paint.

EcoCalce Glaze can be used as finish paint for brick, stone, stucco, lime plaster finishes and most wood products.

## PRODUCT FEATURES

EcoCalce Glaze is a high quality lime paint ideal for highly individualized artistic and historical applications. Product is derived from Acqua San Giovanni. Acqua San Giovanni is a pure mineral release gathered from surface water in lime pits during slaking periods. EcoCalce Glaze when applied to natural lime plasters or products, color tinted, used in multiple dilutions with water, offers unlimited options to create transparent color veils, or color hazes, when applied with a brushes, sponges, rags, or in multiple combination. Product can be applied to certain types of virgin woods and can lightly change or alter natural colors of wood, offering one-of-a-kind staining, atypical of BioCalce Classico, BioCalce A, and EcoCalce S.

EcoCalce Glaze is slow set lime paint, that even when dried, can be manipulated as desired as long as the final technique is completed within a maximum 4 hour time period. Acquires maximum durability when applied on exterior natural masonry surfaces (non-painted surfaces with acrylic paints), for durations of approximately 10 - 20 plus years. No guarantee can be provided for all previously painted surfaces that have been painted with an acrylic or oil based paint.

A 91.5% natural mineral product, permeable, breathable, absorbs CO<sub>2</sub>, provides good anchoring power with mineral surfaces by carbonization. Provides protection against the formation of bacteria that forms mold. Product is considered an organic product, ideal for use in homes, schools, and hospitals and work sensitive areas.

EcoCalce Glaze is specifically designed to be tinted with natural oxide earth tints and 0% VOC colorants to increase esthetic color values with minimal impact to the environment and to provide toxic free air quality for indoors. EcoCalce Glaze is an organic paint material as described in the Bio Category description.

Aesthetic features are extreme flatness, high mineral content, creating unique light refraction capabilities and uncommon luminosity.

## TYPE OF PRODUCT

Slaked lime coating according to UNI 8681 with 8.5% organic stabilizer. No acrylic binders used.

## SHEEN FINISH

Very Flat



DATE REVISION : 06-8-2015

## COLOR

White Base. Color tint up to 8% max with approved tints. Custom color tint matching is available.

## TECHNICAL DATA

CRITERIA	INT. STANDARD	VALUE	UNIT
TVOC & VOC (including tint pigments)	2004/42/CE	5.85	g/l
Water Absorption Coefficient	EN 1062-3	0.09	kg/(m <sup>2</sup> •√h)
Vapor Permeability	DIN 52615-DIN 18550 EN ISO 7783-2	> 80 = S <sub>d</sub> 0.08	g/m (24h)
pH Value	DIN 19266	10 - 11	-
Natural Resistance to Mold	UNI 9805 - UNI 10795	-	-
Specific Gravity (23°C)	EN ISO 2811-2	1.1	g/ml
Granulation	DIN 19643	< 0.01	mm
Gloss Level	UNI EN ISO 2813	< 5	Very Flat
Natural Paint Lime Base NHL 3.5	DIN 18363 - UNI EN 459	10	%
Reaction to Fire	EN 13501-1:2002	A1	Incombustible
Toxicity	CEE 88/379	Non-Toxic	-
APEO (Alkyl Phenol Ethoxylates)	-	0%	-
PEG (Polyethylene Glycol)	-	0%	-
PG (Propylene Glycol)	-	0%	-
Formaldehyde	-	0%	-
Biocides	-	0%	-

Does not contain chemicals that can aggravate or cause asthma, see NIH Asthma Report 2012.

## APPLICATION CYCLE INSTRUCTIONS

### BRUSH APPLICATIONS

**1ST COAT:** Dilute EcoCalce Glaze typically with 100% water, 15 liters of water per one (1) 15-liter bucket to 200% dilution, 30 liters of water per one (1) 15-liter bucket. Minimum dilution should not be below 50% dilution with water. For brick or stucco it is suggested to dampen previously all masonry surfaces with water thoroughly, so as to assist lime wash paints to absorb deeper into the masonry surface. Do not apply paint to overly wet surfaces. Allow 1st coat to dry for at least 2 - 8 hours, or until at least visibly dry, before applying 2nd coat. Brush application required for all coats. Using several types of brush sizes and types and painting by hand will create the best results. Typical application is spot painting, and not in smooth, uniform strokes. Painting with a brush in a crisscross pattern will help create very slight natural chromatic finishes. EcoCalce Glaze can be applied to non-acrylic painted natural mineral surfaces such as stone, brick, stucco, lime plasters and lime paints, without the use of a primer. For interior or exterior applications where the base to be painted is a non-mineral surface (i.e., acrylic paint, sheetrock), apply 1 coat of BioGrip Micro or Medium, and allow to dry for 8 - 12 hours prior to application of 1st and/or 2nd coat of BioCalce lime paints. Allow base coat lime paint applications to dry for 8 - 12 hours before proceeding

with applications of EcoCalce Glaze. For applications on virgin wood surfaces, applications can be performed without primers or lime paints. See EcoCalce S for semitransparent lime wash finishes, to understand how to incorporate transparent and semi-transparent lime finishes.

**2ND COAT:** Apply EcoCalce Glaze diluted with 100% water, 15 liters of water per one (1) 15-liter bucket to 200% dilution, 30 liters of water per one (1) 15-liter bucket. Apply with brush alternating brush stroke patterns, and for best results, alternate color tinting of EcoCalce Glaze, using BioEarth Pigment hand tints, to adjust color hues by 10 – 30%, for each coat application. Painting with a brush in a crisscross pattern will create a very slight natural chromatic finish. Allow 2nd coat to dry for at least 1 – 4 hours before applying a 3rd coat.

**3RD COAT:** Continue applications of EcoCalce Glaze until a satisfactory color and wash effect have provided depth and dimension to treated surfaces.

### ROLLER APPLICATIONS

This product should not be applied with a roller.

### PAINT SPRAYERS

This product is untested for use with a sprayer.

**GRAIN SIZE:** 0.1 mm

## MIXING PAINT & WATER

Most of our paint formulas are concentrated and require water to be added to them for proper use. This process means we can sell more coverage in an economical package that decreases the cost for transport, reduces the carbon footprint, helping the your pocket book and the environment.

**Mix paint and water with an electric drill and paint paddle, or mix well by hand! If water is sitting on the top of your mixture, the paint is not properly mixed!**

## TOOLS

Apply with brush, sponge or rag.

## DRYING TIME

Allow a drying time between successive coats of upon visual drying of any previous coats. Aggressive removal with water and rags or sponges should not occur between coats except after 8 – 12 hours. With lower temperature and humidity more time may be needed.

Do not apply EcoCalce Glaze on the exterior if there is a risk of thunderstorms or showers during the 12-hour drying time needed for product to dry and carbonize correctly.

## CONSUMPTION/COVERAGE

Approximately 500 ft<sup>2</sup> – 1,000 ft<sup>2</sup> / 45 mt<sup>2</sup> – 93 mt<sup>2</sup> per 1 liter consumption, depending on absorption and type of base. Determine exact consumption by performing a test on the surface to be treated.

## PACKAGING

Plastic buckets of 1, 5 and 15 liters.

## APPLICATION CYCLES ON DIFFERENT TYPES OF BASES

Make sure base is solid, dry and well cleaned, prepared with skill. It is recommended to observe the rule VOB DIN 18 363, Part C, paragraph 3.

## NEW SHEETROCK

Apply 1 coat of BioDomus SuperFlat and allow to dry for 8 – 12 hours. Apply 1 coat of BioGrip Micro or Medium with brush or roller and allow to dry for 8 – 12 hours. Apply BioCalce A according to instructions. For walls that have been over-sprayed with Semi-gloss or Gloss paints, oil or latex, BioGrip Micro should be applied as first coat to overspray areas prior to application of BioDomus SuperFlat or BioCalce A. With oil paint over-sprays on new sheetrock, attention must be

made to verify that oil products do not bleed through mineral paint primers or paints. Tests should be done on over-sprays prior to wall application system to verify stable coverage. Apply EcoCalce Glaze according to instructions indicated above.

EcoCalce Glaze can be applied to all types of mineral paint bases, including BioDomus SuperFlat, EcoDomus Matte, BioDomus I and II, BioGrip Micro and Medium, BioCalce Classico, A and S. In addition EcoCalce Glaze can be applied to any type of mineral plaster including, BioCement GF and GM, BioMarmorino and Grasselto Bios.

## PAINTED SHEETROCK

Apply 1 coat of BioGrip Micro or Medium and allow to dry for 8 – 12 hours. Apply BioGrip Micro diluted 40% with water, 6 liters water to one (1) 15-liter bucket. BioGrip may be tinted for light and medium colors. EcoCalce Glaze may be directly applied onto BioGrip or any type of mineral based paint or plaster as indicated section **NEW SHEETROCK**.

## UNPAINTED WOOD

EcoCalce Glaze can be used as a historical and decorative finish on new or reclaimed wooden beams, wood trim, wood ceilings, and even wood floor staining applications. Application of EcoCalce Glaze on wood should not be used on exterior surfaces that are exposed to rain or water without the use of an approved exterior sealer, as this may result in the removal of the lime wash or cause the tannins or resins in many woods to discolor the patina.

## INTERIOR WOOD & BEAMS

Dilute EcoCalce Glaze lime wash at 100% and apply with a brush. Test product before application to verify dilution, finish and technique to create the desired result. For oak or pine species of wood, careful attention must be given to assure that moisture from the lime wash will not release undesirable discoloration from tannins or resins. Allow product to visibly dry and then removes with water and rag and/or sponge as needed, allowing to visibly dry between removals to verify finish. On wood one can lightly sand or steel wool if desired. Additional coats or color hues of EcoCalce Glaze can be applied, using full coverage or spot painting, or wiping as desired to develop final finish. Sealing is not required for interior finishes.

## STAIN BLOCKING PRIMERS

If problems arise from discoloration due to resins or tannins, it is suggested to test sealing the beams with LowCer Varnish Matte diluted at 100% to reduce this affect, or apply an alcohol based shellac or approved white base primer with stain blocking capabilities. Perform tests on wood samples to determine adhesion of EcoCalce Glaze onto clear sealers, and any white base primer/sealers should be painted with a ROMA mineral paint before application of EcoCalce Glaze.

## SEALER

To consolidate EcoCalce Glaze permanently to wood, unlike BioCalce Classico, it is not required to seal with TerraMare Velatura. EcoCer Varnishes can be applied directly onto EcoCalce Glaze without a sealer, if EcoCalce Glaze is the only finish product on wood. If EcoCalce S is applied onto BioCalce Classico, or BioCalce A, apply TerraMare Velatura, diluted at 300 – 500% with water and apply with brush on wood surface, then removing quickly, lightly but deliberately, all excess diluted material with a soft damp rag. TerraMare Velatura is an absolute requirement for lime wash finishes if varnish is desired to be applied as a final finish coat on lime wash finishes.

## VARNISH

EcoCer Varnish can be applied directly onto EcoCalce Glaze. EcoCer Varnishes can be applied on properly prepared lime washes, but only when the lime washes have been thinly applied. Thickly applied lime washes cannot be treated with varnish as a final coat. For applications on lime paint surfaces, dilute LowCer Varnish Matte or Satin for 1st coat, 40 – 100% with water, 4 liters – 10 liters of water to one (1) 10-liter bucket of product. Apply to finished surface by brush and allow to dry for 4 – 8 hours. For floor or cabinet applications dilute the 2nd coat of EcoCer Varnish, 40% with water (if a higher dilution of water was used initially), then 20% with water, 2 liters of water to one (1) 10-liter bucket of product. Apply to finished surface by brush and allow to dry for 8 hours before handling. There are many ways to create lime wash patinas and finishes, and it is advised to test product use and finishes prior to commencement of application of any wood product.

## STONE, STUCCO & BRICK WASHES WASHES

When applied to natural mineral surfaces such as stone, brick, or NHL 3.5 cements EcoCalce Glaze can be applied as a wash, diluting with water 100 – 200%, applying on a wetted/damp surface, applying in a crisscross pattern with a large lime brush, or with a spot painting technique. As product begins to pull, wipe off gently with a brush, rag or sponge to slightly remove color to create an antique patina. For applications on Portland cement stuccos without a mineral base application, no guarantees can be provided for proper adherence. For best results on Portland cement surfaces, always apply a mineral base primer and paint according to instructions.

### WASHES ON PAINT

Dilute BioCalce Classico or BioCalce A with 50 – 150% with water, applying diluted paint over painted or masonry base to acquire a first coat base. Always wet masonry walls abundantly with water making sure that virgin masonry base has absorbed sufficient water so that lime paint application is not performed on a totally dry base. Apply base coat of lime paint and allow to dry for at least 8 – 12 hours. Follow instructions for BioCalce Classico or BioCalce A before application of EcoCalce S onto lime base. To facilitate ease of application of washes on lime paint base, pre-wet liberally all sections of wall to be painted with water, applying diluted EcoCalce S as per instructions on damp wall. Re-wet areas of lime wash again as needed, when moving across the surface with application of EcoCalce S. For wash applications on lime wash base, it is advised to slightly alter color tones or hues to achieve more visible tonalities and effects using EcoCalce S. When applying multiple coats allow time between coats to be visually dry before applying a successive coat of wash or paint.

## BRICK

Always wet exterior masonry walls abundantly with water making sure that virgin masonry base has absorbed sufficient water so that lime paint is not applied on a totally dry base. Dilute BioCalce Classico or BioCalce A with 100 – 120% water, maximum 18 liters of water per one (1) 15-liter bucket of BioCalce Classico or BioCalce A, when applying paint to achieve a full coverage finish. If desired apply a 2nd coat of BioCalce Classico or BioCalce A, diluted 50 – 100% with water, depending on the density of lime paint desired for the surface. Always pre-wet 1st coat surface with water abundantly before applying BioCalce paints on a damp surface to enhance absorption and durability, as well to ease application of lime paint. Apply EcoCalce S for wash or glaze effects as indicated in Section, **STONE, STUCCO & BRICK WASHES**.

BioCalce lime paints cannot be applied to most large flat areas, such as exterior brick floors, without the risk of product deterioration due to freeze-thaw conditions. Brick walls not covered by a roof may create poor conditions for BioCalce paints to remain integrated with brick because of freeze-thaw conditions that can cause brick to deteriorate rapidly on the surface, pulverizing as a result, thus causing lime paints to disappear. This situation can occur on chimneys, thresholds, and brick areas in contact with earth, particularly on the north face, where freezing conditions intensify on wet brick, causing brick to deteriorate rapidly. Brick in constant contact with damp soil may absorb salt nitrates from the earth and this too will cause brick to deteriorate rapidly.

## CONCRETE FLOORS, SIDEWALKS OR DRIVEWAY

BioCalce paints cannot be used on Portland cement based floors, sidewalk or driveways.

## NEW CEMENT STUCCOS PORTLAND CEMENTS

New Portland cement should not be painted for about 28 days to ensure proper anchoring and drying. Apply 1 coat of BioGrip Micro or Medium diluted 30% with water, 4.5 liters water to one (1) bucket 15-liters of product; allow to dry for at least 12 hours. BioGrip may be tinted with tint for light and Medium colors. Apply desired base coats then follow with EcoCalce Glaze according to instructions.

## NHL 3.5 & 5.0 CEMENTS

EcoCalce Glaze can be applied to new wet or damp stucco for maximum effect to intensify durability and create blushing effects. Apply EcoCalce Glaze according to instructions.

If applying lime wash on completely dried NHL 3.5 and 5.0 Cements, review instructions in brick section above and follow APPLICATION CYCLES instructions above. Most mineral paints and lime paints can be applied directly to Natural Hydraulic Cements without the need to prime with BioGrip.

## DECAYING OR CRUMBLING STUCCOS OR POWDERY SURFACES

Chalking surfaces, which could prevent proper anchoring of the base coating must be removed

and pressure washed. Apply Potassium Silicate Concentrate, diluted 100% with water (1:1) on all damaged surfaces, applying 2 – 3 coats in rapid succession and allow to dry for at least 12 hours. Allow to dry for at least 12 hours. Apply 1 coat of BioGrip Micro or Medium diluted 30% with water, 4.5 liters water to one (1) bucket 15-liters of product; allow to dry for at least 12 hours. Apply final paint finishes using EcoCalce Glaze according to instructions.

## COATINGS WITH EFFLORESCENCE

Cement surfaces showing efflorescence should be removed with acid and thoroughly rinsed with water. Apply Potassium Silicate Concentrate, diluted 100% with water (1:1) on all damaged surfaces, applying 2 – 3 coats in rapid succession and allow to dry for at least 12 hours. Apply 1 coat of BioGrip Micro or Medium diluted 30% with water, 4.5 liters water to one (1) bucket 15-liters of product; allow to dry for at least 12 hours. For coatings on surfaces damaged by the saltpeter or efflorescence no guarantees can be provided. Apply final paint finishes using EcoCalce Glaze according to instructions.

## AGED CEMENT STUCCOS

When new stucco repairs are performed on older cement stuccos, apply EcoForte Consolidator diluted 50% with water (2:1), to older surfaces prior to applying new cement stucco. Dirty and/or contaminated surfaces should be cleaned and any attached algae removed manually or by mechanical means, i.e., with a high-pressure washer. Stucco damaged by algae or mold should be treated with EcoDis. Apply EcoForte Consolidator to any new stucco repairs with the same dilution. Apply 1 coat of BioGrip Micro or Medium diluted 30% with water, 4.5 liters water to one (1) bucket 15-liters of product; allow to dry for at least 12 hours. Apply final paint finishes using EcoCalce S according to instructions.

## STUCCO REPAIRS

See Aged Cement Stuccos above.

## STORAGE

Store in a cool, dry and protected from frost. Close the open containers with care. Store liquids only in plastic buckets.

## WARNING!

**Do not apply any products in direct exposure to strong/hot sunlight, rain, mist, high humidity (> 80%), at dew-point formation, or in the presence of strong wind. Beware of the danger of frost overnight. If applied by roller or sprayer, protect surrounding surfaces as necessary. Protect eyes and skin from splashes of paint. Cover glass, ceramic, natural stone, brick, metal, wood, painted surfaces and glazed tiles. Clean affected areas immediately with water. Prominent elements of the building (cornices, parapets, etc.) should be treated with skill, covering flashings, gutters, copper coatings, etc. ...**

**Do not work in air temperature lower than 13°C / 55°F and not above 31°C / 88°F. Clean work tools with water immediately after use. Keep out of reach of children. In case of contact with eyes and skin, wash immediately with plenty of water. In cases of consumption, consult a Doctor or call the CDC Poison Center (see Safety Data Sheet).**

**In case of contact with eyes and skin, wash immediately with plenty of water and/or a saline solution. Always keep a good supply of saline solution for eyes and use abundant amounts to wash eyes. Do not rub eyelids or physically touch your cornea or surrounding area prior to and during washing. Consult a Doctor immediately in cases of irritation or severe burning sensation. In cases of consumption, consult a Doctor or call the CDC Poison Center (see Safety Data Sheet). Keep out of reach of children.**

## **WATER CONTAMINATION HAZARD**

### **CLASS 1**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of information required by the CPR, and it is classified as a non-hazardous material.

## **PRODUCT CONTAMINATION HAZARD**

CODE CER / NORMATIVE EAC / Decision commuted by the Commission n. 2000/532/CE

### **NOT DANGEROUS**

The directive 75/442/CEE, 08 01 production, disposal, formulation, supply, use, and removal of paints and varnishes: 10 13 04 for removal of paints and varnishes; 10 13 04 disposal of lime and hydrated lime products.

## **DISPOSAL**

Do not enter product in its original concentration into drains or open waters. Do not store at public waste disposal sites. In case of conduction into adapted biological purification plants no disturbances need be expected. The preparation has been estimated by conventional method (calculated-procedure) of EG directive 1999/45/EG and is classified as non-hazardous for the environment.

Dispose according to local regulations. Empty cans should be disposed of according to local regulations; plastic buckets are 100% PBS, NO. 5, approved for food storage; 100% recyclable if cleaned thoroughly prior to recycling.

## **ADDITIONAL INFORMATION**

This Technical Sheet lists data collected on the basis of technique and experience. Given the multiplicity of use of the product they cannot be binding and the user cannot refrain from using common sense and experience for the individual case. This information shall not constitute any legal obligation and no obligation from the seller or point of purchase, or any agreements inferred by employees who sale this product. Insurance or guarantees issued by our employees or employees should always be confirmed separately in writing. Any information about product adaptability and use of the product, must be verified by user prior to purchase. Check the exact consumption of product for the surface where product may be applied to determine amount of products needed. **The user must verify the color matching before starting work.**

## **MANUFACTURER**

ZETACOLOR SRL, Via Pistoiese 323, 50010 San Angelo a Lecore, FI, Italia