FIELDS OF APPLICATION

This lime paint is ideal for brick and stone limewash applications for artisan finishes and antique patinas, or for full, solid coverage with no wash off that will not flake or peel.

Excellent paint made with a high quantity of lime putty, for exterior walls and surfaces, for stone, brick, portland cement stucco, cementitious board, and NHL 3.5 and 5.0 stucco mortars. BioCalce Classico can be applied on masonry surfaces to provide a classical 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. BioCalce Classico has been formulated to form a slow set and permit high dilutions with water. A non-acrylic paint product that provides superior adhesion than typical lime paints.

BioCalce Classico can be applied directly to all interior non-painted wood species without a primer, as a decorative effect that can be easily sanded and manipulated to create ceruse finishes and antique effects.

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.

BioCalce Classico can be used as finish paint for full coverage for brick, stone, stucco, lime plaster finishes and some wood products.

PRODUCT FEATURES

BioCalce Classico is a high quality lime paint ideal for painting brick, stucco, and most masonry surfaces. When applied to virgin masonry surfaces (non-acrylic painted surfaces) this paint will not peel or flake. BioCalce Classico acquires maximum durability when applied on exterior natural masonry surfaces (non-painted surfaces with acrylic paints), for durations of approximately 20 – 30 + years when used for Full Coverage. This does not include antique limewash effects because of the heavy lime paint removal process. This product cannot be applied directly to previously painted surfaces that have been painted with an acrylic or oil based paint. This is a historical paint product and has been in use in the United States since the early Colonial period in the early 1700's.

A 100% natural mineral product, completely permeable, breathable, absorbs CO_2, 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.

BioCalce Classico is specifically designed to be tinted with natural oxide earth tints and 0% VOC colorants to increase aesthetic color values with minimal impact to the environment and to provide toxic free air quality for indoors. BioCalce Classico is an Organic paint 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 organic stabilizers, less than 3%. No acrylic binders used.

SHEEN FINISH

Very Flat, Limewash

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	3.9	g/l
Water Absorption Coefficient	EN 1062-3	0.18	kg/(m²• √h)
Vapor Permeability	DIN 52615- DIN 18550, EN ISO 7783-2	S_d 0.10	m
pH Value	DIN 19266	13	–
Natural Resistance to Mold	UNI 9805 – UNI 10795	OK	–
Specific Gravity (23°C)	EN ISO 2811-2	1.3	g/ml
Mineral Finish	DIN 55945	< 3.5%	Thickening Agent
Granulation	DIN 19643	0.01	mm
Gloss Level	DIN 55945	< 5	Very Flat
Natural Paint Lime Base NHL 3.5	DIN 18363 – UNI EN 459	10	%
Reaction to Fire	EN 13501-1:2002	A1	Incomb-ustible
RA-226 Th-232 K-40	Politecnico di Milano- High Resolution Gamma Spectroscopy Results	7.0 ± 1.1 1.0 < 5	Bq/kg Bq/kg Bq/kg
Radon I < 1	Politecnico di Milano - Radiation Protection 112 (UE, 1999)	0.24	I
Toxicity	CEE 88/379	0%	–
Environmental Impact Certification	CEE 880/92 – CEE 1980/2000 C.C.A N° 201230/a-b		
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.

BIO

DATE REVISION : **03-29-2017**

GENERAL LIMEWASH APPLICATION INSTRUCTIONS & TECHNIQUES

(For detailed dilutions and instructions for specific type of surfaces including new and painted drywall/wood, please see **APPLICATION CYCLES ON DIFFERENT TYPES OF SURFACES).**

STONE & BRICK LIMEWASHES

BRUSH APPLICATIONS

When applied to natural mineral surfaces such as stone, brick, or NHL 3.5 cements BioCalce Classico can be applied as an antique wash off (limewash), first diluting the product with water then applying on a pre-dampened surface with a large masonry brush used for lime paint.

Technique requires sufficient pre-wetting with water of the masonry surface for un-painted brick or stone to permit a slow set with the limewash application. BioCalce Classico must be diluted with water between 100 – 150% to permit sufficient lime paint material to remain.

Testing must be determined by several attempts at different dilutions of lime paint with water, as well as surface heat conditions, water pressure, and type of spray tip (wide or narrow), to remove the correct amount of lime paint to create an accurate historical effect. Then, you can begin washing with an adjustable spray hose with at least 55+ PSI pressure, remove the amount of desired paint material without over or under washing. Occasionally, 2 – 3 types of dilution are required to create the desired effect, requiring several coats, with sufficient drying time in between. Correct application and removal will provide a historical washed paint effect for new or existing construction.

1ST COAT: Dilute BioCalce Classico with 100% – 150% water (15 liters of water per one (1) 15-liter bucket to 22.5 liters of water per one (1) 15-liter bucket). For 1 liter sizes, BioCalce Classico should be diluted with 100 – 150% water (1 – 1.5 liters of water per one (1) liter bucket).

Dilutions with water are suggested as general guidelines for application, but paint applicator may adjust dilutions as needed to meet best uses for ease of application, job site requirements and finishes.

PRE-WETTING: For brick or stone it is required to pre-wet all masonry surfaces with water thoroughly to facilitate slow drying of the limewash. This also assists limewash paints to absorb deeper into the masonry surface. Do not apply paint to overly wet/dripping surfaces. Brick walls should be wetted down with water several times.

APPLYING WITH A BRUSH: Apply the pre-diluted BioCalce Classico with a large masonry brush, starting application at the top of the pre-dampened wall, working with the brush left to right, right to left (for brick courses), and for stone apply in a criss-cross pattern. Back brush as necessary to remove runs from the vertical mortar joins, and continue this application as rapidly as possible, moving down the wall to the ground level. Time allowance for a whole wall coverage with limewash is generally 30 - 40 minutes. Try to work in whole wall sections, corner to corner, top to bottom. It is recommended to not paint masonry surfaces exposed to full midday, direct sun exposure. Depending on heat and direct sun, time may be reduced to 10 - 15 minutes.

USING THE SPRAY HOSE: Once the limewash begins to pull or dry, usually indicated with 50% of each brick or stone, half white (indicates dry), and the other half wet (darker/wet), it is the ideal time to begin using an adjustable hose spray (handle type with a plastic tip adjustment), to wash off the lime paint in short bursts, narrowing or broadening the spray tip, as required to remove the quantity of limewash desired, and controlling the force of the spray by the pressure handle.

GENERAL METHODS FOR ACQUIRING ANTIQUE EFFECTS: Typical antique methods are based on observations of time-worn lime painted surfaces. Meaning that environmental erosion by sun, wind, rain, occurs more rapidly on brick or stone areas not protected by eve overhangs and roofs, and typically the upper half sections of the walls will be less worn than the bottom half sections of the wall toward the ground (where runoff from the wall above and back splashing from the ground cause deterioration to occur more rapidly). It is important that the overall antique look of the limewash is gradual and appears natural. Observe your results often from afar, so that you can see the effect of the limewash from a distance.

2ND COAT: 2nd coats are required only when necessary, where perhaps too much lime paint was removed in one area and a touch up is required. Always re-wet the dried surface areas with water, then applying the limewash starting at the center of the area and move out to the sides, overlapping with as little limewash as necessary where you do not need to touch up. It is suggested to use a 2nd clean brush with only water to feather out the overlap so that as the limewash dries, the touch up will not be visible. Allow the touch up to dry as indicated above and rinse off with the spray tip to re-create the finish technique you have adapted.

Touch ups may require greater dilution of BioCalce Classico than when used for the 1st coat. If the standard dilution you used was 100% with water, a small quantity of BioCalce Classico should be diluted with water at 150%, or 1.5 lts of water to one (1) liter of product.

3RD COAT: 3rd coat applications usually serve to create more dynamic dimensional finishes, such as applying a 150 – 200% dilution with water and re-coating areas under roofs, roof eves, under brick row locks, ledges, or in higher upper wall sections to help create depth. It is suggested to only cover narrow areas, applying as needed to create a slightly thicker look than the main wall areas. Follow the touch up instructions indicated in the 2nd Coat above.

Applications should not be performed in air temperature lower than 10°C / 50°F and not above 32° C / 90°F.

GENERAL FULL COVERAGE APPLICATION INSTRUCTIONS

(For detailed dilutions and instructions for specific type of surfaces including new and painted drywall/wood, please see **APPLICATION CYCLES ON DIFFERENT TYPES OF SURFACES**.)

FULL COVERAGE STONE & BRICK

BRUSH APPLICATIONS

PRIMER: For interior or exterior applications where the surface base to be painted is a non-mineral surface (i.e., acrylic paint, drywall, portland cement stucco, wood), apply 1 coat of BioGrip Micro or Medium, applying generously, and allow to dry for 8 – 12 hours prior to application of 1st coat BioCalce Classico.

1ST COAT: Dilute BioCalce Classico with 50 – 120% water (7.5 liters of water per one (1) 15-liter bucket to 18 liters of water per one (1) 15-liter bucket). For brick or stone it is required to pre-wet all masonry surfaces with water thoroughly to facilitate slow drying of the limewash. This also assists limewash 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 before applying 2nd coat. Brush or spray the first coat. Using a large brush and painting by hand will create the best results. BioCalce Classico can be applied to non-acrylic painted natural mineral surfaces such as stone, brick, NHL stucco lime plasters, without the use of a primer.

2ND COAT: Apply BioCalce Classico diluted with 50 – 120% water (7.5 liters of water per one (1) 15-liter bucket to 18 liters of water per one (1) 15-liter bucket). BioCalce Classico should be applied wet on wet. This means that the brick or stone surface should be dampened throughly with water before the application of the 1st Coat, and the same with the 2nd Coat when applying onto the 1st Coat of BioCalce Classico. Keep painted limewash walls damp when applying the 2nd Coat. Use an adjustable spray hose attachment to dampen walls.

Apply with brush when possible. 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.

Dilutions with water are suggested as general guidelines for application, but paint applicator may adjust dilutions as needed to meet best uses for ease of application, job site requirements and finishes.

ROLLER APPLICATIONS

This product is not recommended for roller applications.

PAINT SPRAYERS

FULL COVERAGE

1ST COAT: BioCalce Classico is a non-aggregate paint and can be used in most airless sprayers. Dilute BioCalce Classico with 50 – 120% water (7.5 liters of water per one (1) 15-liter bucket to 18 liters of water per one (1) 15-liter bucket) when applying paint to achieve a full coverage finish. For brick or stone it is required to pre-wet all masonry surfaces with water thoroughly to facilitate slow drying of the limewash. This also assists limewash paints to absorb deeper into the masonry surface. 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 before applying 2nd coat. Particular care must be taken when using a sprayer on brick or stucco to apply product abundantly, without causing paint runs, so as to permit proper millage thickness for longer durability.

2ND COAT: BioCalce Classico paint should be applied wet on wet. This means that the brick or stone surface should be dampened throughly with water before the application of the 1st Coat, and the same with the 2nd Coat when applying onto the 1st Coat of BioCalce Classico. Keep painted limewash walls damp when applying the 2nd Coat. Use an adjustable spray hose attachment to dampen walls.

Dilute BioCalce Classico with 50 – 120% water, and apply as instructed above for 1st coat.

Dilutions with water are suggested as general guidelines for application, but paint applicator may adjust dilutions as needed to meet best uses for ease of application, job site requirements and finishes.

SPRAY TIP USAGE: BioCalce Classico may be applied using an airless sprayer. Apply paint product with a # 0.019 – 0.021 mm size spray tip. Always use new spray tips for starting a paint job for best results. This will also conserve the amount of paint necessary to complete the job.

GRAIN SIZE: 0.01 mm

MIXING PAINT & WATER

ROMABIO BioCalce Lime paints are concentrated and require water to be added to them for proper use. This process means there is sell more coverage in an economical package that decreases the cost for transport, reduces the carbon footprint, and is less impact to 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 an appropriate masonry brush composed of synthetic bristles or with an appropriate sprayer and sprayer tip. Paint rollers cannot be used to apply BioCalce Lime paints.

TOOL CLEANING

Brushes, sprayers, rags, or sponges should be cleaned immediately after use with water and a mild detergent or dish soap.

DRYING TIME

For Wash Off Effects, the Limewash application is generally a 1 coat process, but a 2nd or 3rd coat may be applied for decorative effects. Allow newly applied limewash to set 10 – 60 minutes depending on temperature and sun. Wash off process can begin when bricks appear half wet/half dry, before painted surface is completely dry to the touch.

For Full Coverage Applications, allow a drying time between coats of at least 2 – 8 hours for the 1st coat, and with successive coats allow at least 1 – 4 hours between coats. With lower temperature and humidity more time may be needed.

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

CONSUMPTION/COVERAGE

Limewashes: Approximately 1,500 ft^2 / 139 mt^2 – 2,000 ft^2 / 186 mt^2 depending on absorption and type of base. Determine exact consumption by performing a test on the surface to be treated.

Full Coverage: Approximately 1,000 ft^2 / 93 mt^2 – 1,300 ft^2 / 121 mt^2 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, 2.5, 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 CEMENT STUCCOS

PORTLAND CEMENTS

INTERIOR / EXTERIOR: New portland cement stucco should not be painted for about 21 – 28 days to ensure proper curing, anchoring and drying.

PRE-PRIMER COAT: Apply one (1) coat of Potassium Silicate Concentrate or EcoForte Consolidator with brush, roller or sprayer diluted 100% with water (1:1), or 10 liters of water per one (1) 10 liter bucket as a pre-primer, and allow to dry for at least 8 – 12 hours.

PRIMER COAT: Apply one (1) coat of BioGrip Micro primer, tinted if necessary, with brush, roller or approved sprayer for fine aggregate, diluted 30% with water, or 4.5 liters per one (1) 15 liter bucket and allow to dry for at least 8 – 12 hours.

1ST & 2ND COATS: Apply two (2) coats of BioCalce Classico according to GENERAL APPLICATION INSTRUCTIONS. BioCalce Classico should be applied wet on wet. This means that the surface should be dampened throughly with water before the application of the 1st Coat, and the same with the 2nd Coat when applying onto the 1st Coat of BioCalce Classico. Use an adjustable spray hose attachment to dampen walls.

RECOMMENDATION: For Full Coverage applications of lime paint on exterior portland stucco finishes, it is advised to apply BioCalce Flat Lime (not BioCalce Classico) paint as this product is better suited to non-mineral surface type applications such as portland cement stucco.

NHL 3.5 & 5.0 CEMENTS

BioCalce Classico can be applied to freshly cured wet or damp NHL 3.5 or 5.0 stucco for maximum effect to intensify durability and create blushing effects. For ease of application apply BioCalce Classico by sprayer covering completely moist stucco cement and allow to dry. A 2nd coat is not required for use in such instances. Apply BioCalce Classico according to instructions.

When NHL 3.5 and NHL 5.0 cements have exceeded the damp cycle and have been dried for several days, BioCalce Classico should be applied wet on wet. This means that the surface should be dampened throughly with water before the application of the 1st Coat, and the same with the 2nd Coat when applying onto the 1st Coat of BioCalce Classico. Use an adjustable spray hose attachment to dampen walls.

1ST & 2ND COATS: Apply two (2) coats of BioCalce Classico according to GENERAL APPLICATION INSTRUCTIONS. BioCalce Classico should be applied wet on wet. This means that the surface should be dampened throughly with water before the application of the 1st Coat, and the same with the 2nd Coat when applying onto the 1st Coat of BioCalce Classico. Use an adjustable spray hose attachment to dampen walls.

Apply with an appropriate masonry brush composed of synthetic bristles or with an appropriate sprayer and sprayer tip. Paint rollers cannot be used to apply BioCalce Lime paints.

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 with 100% water, maximum 15 liters of water per one (1) 15-liter bucket of BioCalce Classico, when applying paint to achieve a full coverage finish. Apply a 2nd coat of BioCalce Classico, 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 Classico on a damp surface to enhance absorption and durability, as well to ease application of lime paint. For wash or glaze effects see directions as indicated in stone and brick limewashes.

BioCalce Classico 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 Classico 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 paint to deteriorate. 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. Application by a large masonry brush is recommended.

ABSORBENT BRICK/ INTERIOR / EXTERIOR: For absorbent, unpainted, integral brick, pre-primers or primers are not required in the application of BioCalce Classico. Apply BioCalce Classico directly to brick facade following instructions as indicated in GENERAL APPLICATION INSTRUCTIONS.

For limewash effects on interior brick, applicator is obligated to use hand sprayers, sponges and or rags to create similar results as indicated for exterior limewash finishes.

PRE-PRIMER COATS: None

PRIMER COAT: None

1ST & 2ND COATS: Apply one (1) - two (2) coats of BioCalce Classico according to GENERAL APPLICATION INSTRUCTIONS.

Testing for Absorption: Spray brick surface with water for a couple of minutes to determine if water absorbs rapidly into brick. Brick surfaces will appear to be dry if the brick is absorbent. If after spraying water onto the brick and the brick remains wet, or has not rapidly absorbed water into the surface, then this indicates that BioGrip Micro will be required as a primer before proceeding with EcoDomus Matte.

NON ABSORBENT OR EXTRUDED BRICK / INTERIOR / EXTERIOR: For brick that is nonabsorbent, such as red common brick, glazed brick, or any smooth brick that has a slight sheen, and has been pressure extruded or fired at extremely high temperatures, will not absorb water as a general rule. Testing can be performed by wetting a brick area with a water hose to determine if water absorbs immediately within 1 – 2 minutes, leaving no trace of water sitting on the surface. Positive absorption indicates no need to apply a BioGrip Micro or Medium primer. If water sits on the surface after wetting and water has not absorbed, then BioGrip Micro should be used as a primer in such cases.

PRIMER COAT: Apply one (1) coat of BioGrip Micro or Medium as a primer, tinted if necessary with brush, roller or approved sprayer for fine aggregate, diluted 30% with water, or 4.5 liters per one (1) 15 liter bucket and allow to dry for at least 8 – 12 hours.

1ST & 2ND COATS: Apply one (1) – two (2) coats of BioCalce Classico according to GENERAL APPLICATION INSTRUCTIONS.

UNPAINTED WOOD

BioCalce Classico can be used as a historical and decorative finish on new or reclaimed wooden beams, wood trim, wood ceilings and even wood floors.

INTERIOR: BioCalce Classico can be used for hundreds of decorative finishes both for interior walls as well as unpainted wood surfaces. Decorative effects are generally achieved by various degrees of dilution with water, applying onto other Domus Mineral Paints & Primers, or directly onto wood surfaces with or without the use of BioGrip Primers. These types of decorative finishes have been in use for hundreds of years, and are typical of the historical finishes frequently observed since Medieval and Renaissance periods.

BioCalce Classico applied at higher dilutions of 100%+ can be easily steelwooled or scotchbrited to remove excess material to allow the underneath coat to stand out more predominantly or to fill in the open grains of hardwoods. Applying these dilutions types onto wood will allow for a multitude of effects and also permits the following application of varied layers of paint products, manipulated to create beautiful effects, i.e. such as EcoCalce Semi-Transparent & Glaze, TerraMare Velatura and most can be sealed with LowCer Varnish or LowCera Soft Wax. BioCalce Classico upon drying after application onto a wood surface can be wiped with a rag or sponge, and/or lightly sanded, steelwooled, or scotchbrited. Effects can be varied and require testing before a final decorative finish is acquired.

EXTERIOR: Application of BioCalce Classico on wood should not be used on exterior surfaces that are exposed to rain or water, unless they are properly sealed with TerraMare Velatura, and coated with LowCer Exterior Varnish, as this may result in the removal of the limewash or cause the tannins or resins in many woods to discolor the patina.

1ST COAT: Dilute BioCalce Classico with 100 – 150% water (15 liters of water per one (1) 15-liter bucket to 22.5 liters of water per one (1) 15-liter bucket). For 1 liter sizes: BioCalce Classico diluted with 100 – 150%, (1 – 1.5 liters of water per one (1) liter product).

Wet wood surface with water, using a brush, sponge or hand sprayer to expand wood grain surfaces. Dry damp wood surfaces, then apply diluted limewash onto the unpainted wood surface. Allow painted surface to fully dry, then remove excess limewash from the wood surface using steelwool or Scotchbrite type flexible abrasive pads.

Upon removal, vacuum excess dust or wipe of with a slightly damp sponge of cloth. BioCalce Classico can be applied several times and with different tint colors to create depth and dynamic decorative finishes.

SEALERS/VARNISHES: For consolidation of limewash on wood refer to instructions provided in TerraMare Velatura TDS. For sealing with matte or satin varnish please refer to LowCer Varnish TDS. Other references for limewash/ ceruse finishes please refer to LowCer Stain TDS.

WARNING IRRITANT! Always use a high quality professional dust mask with interchangeable filters when removing or sanding BioCalce Classico. Inhaling lime dust is an irritant and exposure to adults or children can provocate allergic reactions and damages to bronchial passages or lungs.

CEMENTITIOUS BOARD

It is not advised to use BioCalce Classico for application on cementitious boards.

CONCRETE FLOORS, SIDEWALKS OR DRIVEWAY

BioCalce Classico cannot be used on portland cement based floors, sidewalk or driveways.

REINFORCED CONCRETE SURFACES

It is not advised to use BioCalce Classico for application on reinforced concrete surfaces. If required follow instructions as indicated for ADOBE BRICK below.

CMU/CONCRETE BLOCK

INTERIOR/EXTERIOR: Mortar joints should not be painted for about 28 days to ensure proper curing and drying. Follow instructions as indicated above for new cement stuccos.

PRE-PRIMER COAT: For best results apply Potassium Silicate Concentrate, diluted 100% with water, o (1:1), or 10 liters of water per one (1) 10 liter bucket as a pre-primer, on all new cement surfaces, applying 2 – 3 coats in rapid succession, wet on wet, until substrate has arrived at full absorption, and allow to dry for at least 2 - 3 days; or as an alternative apply one (1) coat EcoForte Consolidator with brush, roller or sprayer diluted 100% with water, or 10 liters of water per one (1) 10 liter bucket as a pre-primer, and allow to dry for at least 8 – 12 hours.

PRIMER COAT: Apply at least one (1) coat of BioGrip Micro or Medium primer as indicated in GENERAL APPLICATION INSTRUCTIONS.

1ST & 2ND COATS: Apply two (2) coats of BioCalce Classico according to

GENERAL APPLICATION INSTRUCTIONS. For FULL COVERAGE it is advised to use BioCalce Flat Lime paint.

ADOBE BRICK

INTERIOR / EXTERIOR: Adobe brick being made of a composite of dirt/sand and inorganic material is extremely susceptible to damages caused by water on exterior surfaces. Potassium silicate paints are ideal because they will carbonize to mineral content in the clay brick, creating consolidation, strengthening the external surfaces and allow them to be water resistant and permeable when painted with BioDomus I.

PRE-PRIMER COAT: For best results apply Potassium Silicate Concentrate, diluted 100% with water, o (1:1), or 10 liters of water per one (1) 10 liter bucket as a pre-primer, on all new, unpainted surfaces, applying 2 – 3 coats in rapid succession, wet on wet, until substrate has arrived at full absorption, and allow to dry for at least 2 -3 days.

PRIMER COAT: Apply at least one (1) to two (2) coats of BioGrip Micro or Medium primer as indicated in GENERAL APPLICATION INSTRUCTIONS.

1ST & 2ND COATS: Apply two (2) coats of BioCalce Classico according to GENERAL APPLICATION INSTRUCTIONS. For FULL COVERAGE it is advised to use BioCalce Flat Lime paint.

AUTOCLAVED AERATED CONCRETE

INTERIOR / EXTERIOR: Autoclaved aerated concrete cannot be painted, plastered or stuccoed directly onto non-consolidated and unprimed surfaces. Using ROMABIO Specialty Products and Primers applied onto autoclaved aerated concrete will permit the proper application of any type of paint, plaster or stucco to be applied the surface.

PRE-PRIMER COAT: It is recommended to apply one (1) coat of Potassium Silicate Concentrate diluted 100% with water, or 10 liters per one (1) 10 liter bucket, applying wet on wet, applying 2 – 3 coats in rapid succession until aerated concrete has completely and evenly absorbed the Potassium Silicate Concentrate into surface. This process will double the strength and durability of the surfaces of aerated concrete, as well as increase adhesion of any type of applied material. Apply Potassium Silicate Concentrate with a brush, roller, or sprayer and allow to dry for 2 – 3 days.

PRIMER COATS: Apply at least two (2) coats of BioGrip Micro primer as indicated in GENERAL APPLICATION INSTRUCTIONS.

1ST & 2ND COATS: Apply two (2) coats of BioCalce Classico according to GENERAL APPLICATION INSTRUCTIONS. For FULL COVERAGE it is advised to use BioCalce Flat Lime paint.

DECAYING OR CRUMBLING STUCCOS OR POWDERY SURFACES

INTERIOR / EXTERIOR: Chalking surfaces, which could prevent the proper anchoring of the base coating must have damaged and chalky portions be removed by pressure washing and scraping. If pressure washing is not an option for interior surfaces, scrub affected areas with a stiff brush and white vinegar or muriatic acid (1 part muriatic acid and 6 – 7 parts water), and after 3 -5 minutes rinse several times with a large sponge and clean water.

PRE-PRIMER COAT: For unpainted stuccos apply Potassium Silicate Concentrate diluted 100% with water (1:1) on all damaged surfaces, or 10 liters of water to one (1) 10 liter bucket, applying wet on wet, applying 2 – 3 coats in rapid succession, until substrate has arrived at full absorption, and allow to dry for at least 2 – 3 days. For old, acrylic-free painted stuccos, apply one (1) coat EcoForte Consolidator diluted 100%, or 10 liters of water to one (1) 10 liter bucket, and allow to dry for at least 8 – 12 hours.

PRIMER COAT: Apply one (1) coat of BioGrip Micro, as a primer tinted if required, with brush, roller or approved sprayer for fine aggregate, diluted 30% with water, or 4.5 liters per one (1) 15 liter bucket, and allow to dry for at least 8 – 12 hours.

For severe cases of deterioration, take into consideration the removal and replacement of damaged stucco in its entirety. Cement stuccos existing prior to 1940 are probably made of NHL 3.5 or 5.0 (Natural Hydrated Lime Cement) and careful inspection and attention needs to be taken to ensure proper replacement and repairs. At all costs, avoid using portland based cements for restoration or repairs on NHL cements.

1ST & 2ND COATS: Apply two (2) coats of BioCalce Classico according to GENERAL APPLICATION INSTRUCTIONS. For FULL COVERAGE it is advised to use BioCalce Flat Lime paint.

COATINGS WITH EFFLORESCENCE

INTERIOR / EXTERIOR: Cement surfaces showing efflorescence should be aggressively cleaned with a high pressure washer or stiff brush, and then the efflorescence should be treated using a diluted muriatic acid, 1 part muriatic acid and 6 – 7 parts water, and allow to react for 3 – 5 minutes. Thoroughly rinse treated areas with water and allow to dry.

PRE-PRIMER COAT: Apply Potassium Silicate Concentrate diluted 100% with water (1:1), or 10 liters to one (1) 10 liter bucket, on all damaged surfaces and allow to dry for at least 12 – 24 hours; or apply one (1) coat of EcoForte Consolidator diluted 100% with water, or 10 liters to one (1) 10 liter bucket, and allow to dry for at least 8 – 12 hours. This application applies only to unpainted, or mineral painted surfaces only.

PRIMER COAT: Apply BioGrip Micro primer, diluted with water 30%, or 4.5 liters per one (1) 15 liter bucket, and allow to dry for at least 8 – 12 hours.

1ST & 2ND COATS: Apply two (2) coats of BioCalce Classico according to GENERAL APPLICATION INSTRUCTIONS. For FULL COVERAGE it is advised to use BioCalce Flat Lime paint.

AGED CEMENT STUCCOS

INTERIOR / EXTERIOR: Dirty and/or contaminated surfaces should be treated as a priority prior to any interventions of replacing or repairing stucco. All 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 after pressure washing. These instructions are based on unpainted portland based type cement stuccos.

PRE-PRIMER COAT : When new stucco repairs are performed on older, unpainted cement stuccos, complete all removal of damaged stucco, rinse surfaces of dust, and apply EcoForte Consolidator to older surfaces prior to applying new cement stucco or make repairs. Pre-prime existing surfaces applying one (1) coat of EcoForte Consolidator diluted 100% with water, or 10 liters to one (1) 10 liter bucket, and allow to dry for at least 8 – 12 hours.

PRE-PRIMER COAT / REPAIRS: Allow new cement repairs to fully dry and cure according to instructions indicated under section; NEW CEMENT STUCCOS. Apply EcoForte Consolidator diluted as indicated onto any new stucco repairs and allow to dry for at least 8 – 12 hours.

PRIMER COAT / INTERIOR / EXTERIOR: Apply one (1) coat of BioGrip Micro primer as indicated in GENERAL APPLICATION INSTRUCTIONS. Where repairs require the application of BioCement 1.0 GF, it is suggested to use BioGrip Medium primer.

1ST & 2ND COATS: Apply two (2) coats of BioCalce Classico according to GENERAL APPLICATION INSTRUCTIONS. For FULL COVERAGE it is advised to use BioCalce Flat Lime paint.

STUCCO REPAIRS

See Aged Cement Stuccos above.

PAINTED SHEETROCK

It is not suggested to use BioCalce Classico on painted drywall. For application on drywall use BioCalce Flat Lime Paint.

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 32° C / 90°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 eye lids 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.

PRODUCT LIMITATIONS

Only dilute the amount of paint material required to paint surface area as needed. Unopened, unused, and undiluted BioCalce Lime Paints can be stored in their original container for an extended time period. Once the product has been removed from its container and is diluted, the diluted material cannot be stored for extended time periods without the risk of forming mold. Undiluted paint material can be stored as long as the remnant is repackaged and stored in a completely filled plastic container of product. For best results turn container upside down to help prevent air to enter into the bucket via the paint can lid causing spoilage or premature drying. After water has been added for dilution, ROMABIO cannot guarantee the shelf life of the product.

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. No refunds or exchanges will be provided for tinted products after they have been consumed or applied.

MANUFACTURER

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