

deGruchy's

LIME



WORKS.us

Makers of

ecologic®

Mortar & Plaster Brand  
For Historic Restoration  
and Green Building

Phone: 215-536-6706  
Fax: 215-453-1310

3145 State Road, Telford, PA 18969

www.LimeWorks.us

Last Modified: Mar 31, 2022

## Ecologic™ LithoCast Brick, Stone, and Cast Concrete Repair Material

For creating an integrally colored cast stone, brick or other masonry element for interior or exterior installations

Ecologic™ LithoCast is a specially formulated repair mortar that is derived from Saint-Astier® Lithomex, the *vertical* Brick and Stone surface repair material. Ecologic™ LithoCast is especially useful for casting brick, stones, sills, treads, ornamental objects like gargoyles, grotesques and object art where the mixture is integrally colored and the end product is also capable of being put in all outdoor natural weather environments after it is fully cured or built into a masonry wall. Ecologic™ LithoCast can be used to top off and detail Ecologic™ LimeCrete that has first been used as the cost-saving foundational element when creating a cast masonry unit if it is valuable to the end user to not use pre-colored Ecologic™ LithoCast throughout the whole casting.

Ecologic™ LithoCast can be built up in **1" lifts daily**, or in **2" lift increments daily when a stainless steel armature** of stainless threaded rod or stainless steel threaded rod and stainless steel connecting wire between the rods is first anchored into the substrate to support the Ecologic™ LithoCast lift installation with all rods and wire stopping short of the final finish by 3/4" of the final profile finish.

It is recommended when recreating the final lift and final finished profile of material which is placed over the first lift of Ecologic™ LithoCast or a cast LimeCrete applications it is applied as a 3/4" -1" coat over these substrates. See separate Cut Sheet on Ecologic™ LithoStep when repairing stone loss for treads and its full range of benefits.

Ecologic™ LithoCast can be used in applications at either the vertical faces of Cast Stone or where there will be no foot traffic but still have high exposure, such as on top of a Cast Stone coping.

Ecologic™ LithoCast is neutral white in color or can be custom colored. Ecologic™ LithoCast is supplied in 55 lb (25kg) pails to which only mixing water is added. It is also available in units of 3 lbs or 15 lbs containers.

### Benefits:

Ecologic™ LithoCast has unique qualities that allow it to be shaped immediately or carved using stone carving tools or sanded with PermaGrit® sanding blocks about a week after the final set, depending upon weather and final curing.

For surface repairs to be successful the materials used for the repair need to have certain characteristics. They should:

- Have a similar but slightly lesser compression strength and tensile strength to that of the original masonry material being repaired.
- Have adequate bond strength.
- Have a good modulus of elasticity.
- Have good vapor permeability.
- Remain durable.
- Be capable of being dressed to a similar profile as the original masonry.
- Remain workable long enough to allow details to be created before an initial set.
- Simulate the color of the surrounding masonry.
- Simulate the texture of the surrounding masonry when properly tooled.
- Be reversible.

**Mixing:**

Ecologic™ LithoCast can be mixed manually or be mixed mechanically using a drill and paddle mortar mixer, adding approximately 1.1 gallons of water per 55 lb of Ecologic™ LithoCast. For smaller batches mix approximately 64 Milliliters of water to one dry cup of Ecologic™ LithoCast. Mix well for 3-5 minutes. Adjust final water content carefully to the consistency required.\* For small quantities mixed by hand, add just sufficient water to make a semi-dry crumbly consistency, beat vigorously for a few minutes, and carefully add a few drops of water at a time until desired consistency is achieved. (8 oz water to 3lbs Ecologic™ LithoCast) *\*The addition of too much or too little water can alter colored Ecologic™ LithoStep. It is recommended to use a consistent amount of water to ensure color consistency between batches.*

**Application:**

The application surface must be clean, free from dust and oils. On porous surfaces, ensure that pre-wetting of the surface is carried out to control excess suction of the mixing water from Ecologic™ LithoCast. Apply Ecologic™ LithoCast before the surface is fully dry or into clean and slightly dampened forms. Never apply to surfaces that are over saturated or have standing water. Ecologic™ LithoCast can also be applied to non-rusting lath fastened with non-rusting anchors. The minimum thickness is 3/16" (5mm). Ecologic™ LithoCast can be dressed or cut back to a feather edge when set. For projection / molded work, greater than 4" (100mm) it is necessary to install a stainless steel armature. Apply Ecologic™ LithoCast in layers that can be built out to 2" (50mm) in any single working day. Always dampen the application area between lifts. Ecologic™ LithoCast should be well pressed back in place within the formwork and tapping on the outside of form or using vibrating table to ensure air pockets are reduced is suggested. If necessary, re-compact by pressing after a couple of hours to suppress any slight shrinkage. Always support Ecologic™ LithoCast with the use of forms and the strategic placement of stainless steel wire and anchors. Simulation of stone / brick features, rough finishes, false joints etc. can be made up to 2 hours from initial application. Ecologic™ LithoCast can be taken out of forms and molds after 24-48 hours depending on how deep the casting was done. 2" relates to 24 hours and 4" or more should remain in the forms for 48 hours before being removed. Ecologic™ LithoCast should then be

allowed to air cure for at least a week before an Ecologic™ LithoCast unit is installed into a masonry wall. Ecologic™ LithoCast will readily accept Ecologic™ LimeWash and Ecologic™ Potassium Silicate Paint or any Ecologic™ Colorwash Stain for decoration.

**Environmental Requirements:**

Materials must be stored and handled to protect them from damage and moisture in accordance with Manufacturer’s instructions. It is recommended to take precautionary measures necessary to assure that excessive temperature changes do not occur. Do not apply Ecologic™ LithoCast unless minimum ambient temperature of 45 degrees F and a maximum of 85 degrees F have been and continues to be maintained for a minimum of 48 hours prior to application and until Ecologic™ LithoCast has cured. During hot weather protect Ecologic™ LithoCast from uneven and excessive evaporation during the dry, hot weather. It is suggested to provide tarping over the outside of all scaffolding to shelter Ecologic™ LithoCast during inclement weather or to create a conditioned space during excessively hot or cold weather.

**Technical Data:**

|              |   |
|--------------|---|
| Bulk Density | Lbs./cu ft : 82.5 to 85                             |
| Granulometry | From #23 to #200                                    |
| Consumption  | 4.7 to 5 lbs. per sq. yd.<br>Per 1/16" of thickness |

Setting time (in water with no surcharge): start – 1h-30min / end – 2h-30min. Tests on paste (water addition 18.7%)

**Safety:**

Wear adequate protective clothing to avoid prolonged contact with the mortar. To avoid dust contact with eyes and possible inhalation wear glasses and the appropriate dusk mask especially in areas not properly ventilated.

**Disposal:**

Sweep and place bulk material in containers and properly remove for disposal. The final, cured product is not hazardous. Dispose of in a landfill in accordance with all local, state and federal regulations.

*All LimeWorks.us publications are offered on a complementary basis and as a general guide for our customers without guarantee to the accuracy or completeness of any information contained in them. The purchaser is solely responsible to determine the*

## **Contact**

LimeWorks.us

3145 State Road, Telford, PA 18969

[www.LimeWorks.us](http://www.LimeWorks.us)

Technical help phone: 215-536-6706

Fax number: 215-453-1310

***E-mail: [info@LimeWorks.us](mailto:info@LimeWorks.us)***