

# Lithomex Stone Restoration and Repair Mortar

St Astier Natural Hydraulic Limes (NHL)

Specially formulated mortar based on Natural Hydraulic Lime and aggregates for the repair or simulation of masonry, brick or stone. Lithomex is a neutral white or pre coloured mortar supplied in 1KG to 25KG bags to which mixing water is added. Mixing and use: Can be mixed manually or mechanically by whisk, adding up to 180ml water per kilogram of Lithomex used. Mix well for 3-5 minutes. The application surface must be clean, free from dust and oils. On porous surfaces, ensure that suction is controlled by pre-wetting and apply Lithomex before this is fully dry. Never apply to surfaces that are over saturated or have standing water. It can also be applied on metal laths. For application on dense impervious materials, please consult us.

The minimum thickness is 5mm (can be dressed or cut back to a feather edge). The maximum thickness in 1 pass is 40mm. In cases where a thickness of more than 40mm is required, apply in layers of a maximum of 40mm, each one approximately 24 hours apart. Always dampen application areas. The mortar should be well pressed back in place. If required re-compact by pressing after a couple of hours to avoid possible shrinkage marks due to suction from the background. In some instances support of the fresh mortar is required by using wires, anchorages, stainless steel fixings or formers, etc... Simulation of stone / brick features, rough finishes, false joints etc. can be made approximately 5 hours from application (in damp cold weather up to 24 hours).

Shaping and forming of details can be carried out for up to 1 week after placing by scraping to profile or level with metal tools, such as the edge of a trowel or steel float however most shaping and finishing work can be done within 24 hours. Sculpting, using appropriate tools, requires waiting up to a week or more depending on the weather conditions. Its unique qualities allow it to be tooled, shaped and sculpted even after the final set has taken place. This affords sufficient time to achieve the very highest standard of work with the best quality reproduction.

Where ashlar masonry or very finely jointed masonry has had considerable damage to the arises, flush finishing in Lithomex with a false struck joint is the ideal solution.

If building details are damaged and require repair prior to the facade being lime washed or painted, plain Lithomex should be used as it will readily accept lime washes and paints.

On rendered areas Lithomex can be used to form decorative stone or brick features such as mouldings and cornices.

## Technical Data

**Bulk density:**( kg/m<sup>3</sup> ) : 1325 - 1360

**Granulometry:** from 0.8 to 0.08mm

**Consumption:** 1.6 to 1.7 kg. per m<sup>2</sup> per mm. of thickness

**Setting time** (in water with no surcharge): start 1h30min / end 2h30min. Tests on paste (water addition 18.7%)

Tests on hardened mortar (water addition at 18.7%)	
Capillarity 2.06 gr.cm <sup>2</sup> . root2 min	LOW tested at 28 days
Water permeability 0.25 ml.m.day	LOW tested at 28 days
Vapour permeability 0.75gr.m <sup>2</sup> .hour.mmHg	VERYHIGH tested at 28 days

	Tensile Strength N/mm <sup>2</sup>	Compressive Strength N/mm <sup>2</sup>	Elasticity Moduli MPa	Shrinkage mm.m
7 days	2.20	6.20		0.81
28 days	2.38	7.25	7690	0.85



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Pure  
&  
Natural  
Hydraulic  
Limes

# Health and Safety Recommendations for Lithomex from St Astier

See also: [Lithomex Data Sheet](#)

## Product and Manufacturer Identification

- **Product:** a blend of Natural Hydraulic Lime and hydraulic binder, filler, lightweight filler and additive  
**Use:** stone repair mortar
- **Manufacturer:**  
**Name :** Group C.E.S.A
- **Adresse :** 24110 St Astier, France  
**Tél :** 05.53.54.11.25  
**Fax :** 05.53.04.67.91
- **In case of Urgency:**  
**France - ORFILA,** Tél : 01.45.42.59.59  
**UK – The Lime Line** Tel: 0800 7839014  
**Ireland – The Traditional Lime Co.** Tel : 05991 51750

Chemical Name	EINE CS number	CAS number	Classification	Concentration or Concentration range
Calcium hydroxyde	215-137-3	1305-62-0	X <sub>i</sub> R 41	≤ 20 %
Hydraulic binder	266-043-4	65997-15-1	X <sub>i</sub> R36/37/38-43	≤ 20 %
Filler	Not listed	1318-00-9	/	≤ 5 %

## IDENTIFICATION OF DANGERS

Risk symbol	Principal risks for people and the environment
<b>X<sub>i</sub></b>	<ul style="list-style-type: none"> <li>• Hydraulic limes and binders are irritant for eyes, respiratory track and mucous membranes</li> <li>• Risk of severe eye damage in cases of splashes of powder or wet mortar in the eyes</li> <li>• Once hydrated, Lithomex increases its Ph and therefore can irritate or dry the skin</li> <li>• In cases of significant ingestion limes and hydraulic binders are caustic for the digestive tract. It can cause burning of the mouth, esophagus and stomach</li> <li>• Lithomex does not present particular risks for the environment subject to the recommendations in section XIII and the respect of national or local</li> </ul>

## First Aid (urgent cases)

<b>Contact with eyes</b>	Wash immediately and abundantly with clean water and consult an ophthalmologist.
<b>Contact with the skin</b>	Wash the affected area abundantly with clean water. Afterwards wash again with soap or light detergent. Protect clothing.
<b>Inhalation</b>	Wash nose and throat with clean water. Breathe fresh air. If necessary consult a doctor
<b>Ingestion</b>	Wash mouth, drink some water and consult a doctor.

## ANTI FIRE MEASURES

The product is not flammable.

All fire extinguishing agents can be used. Above 950°C the lime will produce CO<sub>2</sub> emission.

## ACCIDENTAL SPILLAGE MEASURES

<b>Individual precautions</b>	<ul style="list-style-type: none"> <li>• Avoid all contacts with the eyes</li> <li>• Avoid contact with the skin</li> <li>• Handle the product with appropriate gloves.</li> </ul>
<b>Protection of the environment</b>	Avoid disposal in surface waters, sewers and drains.
<b>Cleaning and recovery methods</b>	Avoid creating dust when collecting loose product. Once hardened the product can be collected as a normal construction debris. The hardening process is variable in accordance with weather conditions and water addition but is never below 1 hour.

## USAGE, STOCKING AND HANDLING PRECAUTIONS

<b>STOCKING</b>	<b>HANDLING</b>
Store away from acids and from the reach of children	<ul style="list-style-type: none"> <li>• Wear appropriate gloves</li> <li>• Avoid inhaling the dust, wearing a mask if necessary</li> <li>• To avoid contact with the eye, wear suitable safety goggles</li> <li>• Manual handling : observe local health and safety directives</li> </ul>

# CONTROL PROCEDURES FOR WORKERS' EXPOSURE AND TYPE OF EQUIPMENT FOR INDIVIDUALS' PROTECTION

Exposure control:

Total Dust:	10mg/m <sup>3</sup>
Cellular dust:	5mg/m <sup>3</sup>

Individuals' protection:

Respiratory protection:	Wear appropriate mask
Hands protection:	Wear appropriate gloves
Eyes protection:	Wear goggles to avoid risk of splashes in the eyes
Skin protection:	Wear suitable protective work clothing

## PHYSICAL AND CHEMICAL PROPERTIES

Colour	White or pale grey powder
Odor:	none
PH in water solution:	Between 12 and 13 (in saturated solution)
Fusion temperature:	1000°C
Apparent volumetric mass:	0.65g/cm <sup>3</sup> at 20°C
Danger of Explosion:	Not explosive
Solubility in Water	> 1.5 g/l at 20°C
Absolute volumetric mass	2.6g/cm <sup>3</sup> at 20°C
Apparent volumetric mass	0.65g/cm <sup>3</sup> at 20°C

## STABILITY AND REACTIVITY

Stability:	The product is stable at all temperatures.
Conditions to avoid:	Storage in damp areas to avoid an hydraulic set.

Materials to avoid:	Reacts strongly with acids, generating CO <sub>2</sub> .
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## TOXICOLOGICAL INFORMATION

**Not toxic.**

Refer to Identification of Dangers and First Aid Measures [above](#) for effects on health.

## ECOLOGICAL INFORMATION

<b>Mobility</b>	None
<b>Potential bio-accumulation</b>	None
<b>Ecotoxicity:</b>	Lithomex in powder is an alkaline material that brings the water pH to 12.4 in saturated solution  In hardened form Lithomex is stable and its components are insoluble

## DISPOSAL INFORMATION

The product in its hardened state can be disposed as a normal construction debris.

Dispose of used bags in authorised refuse areas in accordance with local directives.

## TRANSPORT INFORMATION

Lithomex is classified as a non dangerous material.

## COMPULSORY INFORMATION

<b>Danger symbol</b>	Xi irritant
<b>Principal components</b>	Calcium hydroxide
<b>Phrases R:</b>	<ul style="list-style-type: none"> <li>• R36/37/38- irritant for the eyes, respiratory ways and the skin</li> <li>• R41 - risk of severe lesion to the eyes</li> <li>• R43 – can damage the skin</li> </ul>
<b>Phrases S</b>	<ul style="list-style-type: none"> <li>• S2- keep away from childrens' reach</li> <li>• S24/25 – avoid contact with the skin and the eyes</li> <li>• S26 in case of contact with the eyes, wash immediately and abundantly with clean water and consult a specialist</li> <li>• S37 – wear appropriate gloves</li> <li>• S39 - wear protective eye goggles.</li> </ul>

## **IMPORTANT NOTE:**

The information in this document are based on our knowledge as it stands at the time of issue related to this product. They are given in good faith.

Under no circumstance the information can be considered as a quality guarantee.

The User attention is drawn to the eventual risks caused by the utilisation of a product for different purposes from the ones for which the product has been envisaged. It is the responsibility of the User to adopt the appropriate safety measures and to apply all regulations current at the time of use.

The prescriptions contained in this document are given to help the User to fulfill its obligations. The precautions listed cannot be considered as exhaustive.

See also: [Lithomex Data Sheet](#)



**For further Guidance, contact your St Astier Distributor.**  
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