

LIME

LIME, THE NATURAL CHEMICAL



CALCIDRATA
INDUSTRIAS DE CAL, S.A.



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HISTORICAL NOTE

01 Our activity in the lime industry began some decades ago, dating back to the past century, specifically 1922. It was at a location close to us that José Batista, grandfather of the main partners, experimented with the handicraft cooking of limestone, thereby transforming it into lime.

A long tradition of corporate activity connected to the lime industry thus began.

Then, it was in Viegas in 1947, following the teachings of his father, that Manuel Baptista continued the same type of activity.

Later, Manuel da Piedade Batista and António Manuel da Piedade Baptista, followers of their father, took on the leadership of the family activity as they had dealt with lime since they were children. In 1982, Manuel da Piedade Baptista & Irmão, Lda. was formed.

The new partners influenced a new and strong dynamism in the company that registers years of development, in which the most relevant aspect was

the important technological alterations introduced in the production process, thanks to the teachings and also the knowledge acquired by the family over the decades, both nationally and internationally, thereby centralising their strategy on the constant search for the development and improvement of quality.

In 1994, it is bought by the company Calcidrata - Sociedade Industrial de Calcário, Lda, thereby creating a sustained growth and development strategy.

As a consequence, a modernisation process of the existing facilities is initiated together with an increase in the production capacity, with the installation of a vertical shat kiln , an hydration plant and a fully automated bagging line.

The extraction and sale of ornamental rock blocks was also initiated at this time.

In 1996, the second kiln is installed and the first research is initiated to study the formulations of ready-mix mortar.



1997 is the year in which the newest member of this group of companies appears, Transicálcio - Transportes e Comércio, Lda, whose mission is the logistical support of the first two companies, both in terms of production flows, as well as the supplies that they both depend on.

In 1998, in order to open the capital to the younger members of the family, thereby giving continuity to the family in the lime industry, and also to make its management more open and transparent, and possibly even prepare the company to enter into a strategic partnership, the limited company was turned into a limited liability company (Calcidrata - Indústrias de Cal, S.A.).

In 2000, the company certification process for the ISO 9001 standard is initiated and ends in 2002 with the certification audit and the attribution of the respective certificate. Calcidrata becomes the first national company operating in this sector to be given this distinction.

In mid 2006, Calcidrata begins a new cycle of investment in the scope of its expansion strategy in the lime production activity and complementarily some products directly derived from lime, so as to increase its positioning in international markets and also as a tool to fight against the volume of imports into the national market.

In addition to these investments, the Environmental Certification process in accordance with standard ISO 14001 begins, as well as, and in accordance with the legislation in force, the EC Marking of products for civil construction, which was successfully concluded. Still in the regulation area, focus should be given to the registering of the company in REACH, a regulation related to the Registration, Evaluation, Authorisation and Restriction of Chemicals.

At the end of 2008, the company is in the progress of launching various lime derived products, while always keeping the perspective of obtaining added value.



ANCIENT KILN



MODERN KILN

THE COMPANIES



MANUEL DA PIEDADE
BAPTISTA & IRMAO, LDA



CALCIDRATA
INDÚSTRIAS DE CAL, S.A.



TRANSICÁLCIO
TRANSPORTES E COMERCIO, LDA



ENGISAL
OBRAS E MATERIAIS DE CONSTRUÇÃO



MCE, S.L.
MORTEROS Y CALES DE EXTREMADURA



EXTRACTED PRODUCTS

LIMESTONE

Limestone is a sedimentary rock based on calcium carbonate with the chemical formula of $CaCO_3$.

This product, formed over millions of years, is our main raw material, by excellence.

What we use comes from Serra d'Aire e Candeeiros, from the location found on the slope of Chainça-Pé-da-Pedreira, and has a calcite structure with a low impurity content, namely silica, aluminium, iron and magnesium, is denominated high purity limestone because it has a content of approximately 56% of calcium oxide (CaO).

Once it is extracted from the quarry, the limestone is submitted to a crushing and selection process.

STONWORK

We call the limestone rock that comes from the exploration front stonework, and which is only subjected to a reduction process by means of a pneumatic hammer, until it reaches a diameter of 20 - 30 cm.

GRAVEL

Gravel is the result of the limestone crushing and selection processes, and is presented with various sizes which vary between 0-1, 1-2, 3-4, 4-10.

TOUT-VENANT

This material is a by-product, as it is the waste which is the result of the limestone crushing and selection process.

Stonework and gravel, in addition to being used in the manufacture of lime, are also supplied to civil construction and public works. Tout-venant is exclusively used for this purpose.

ORNAMENTAL ROCKS

Under the layer from which we extract the limestone for lime, another type of rock appears. Still limestone rock, but with characteristics which make it particularly attractive to ornamental and monumental works.

03



CREME CHAINÇA CR|CH



MOCA CREME TRADICIONAL M1



MOCA AZUL (BLUE) M3 AZ



MOCA CREME MÉDIO (MEDIUM GRAIN) M3



MOCA CREME FINO (FINE GRAIN) M2

PRODUCTS MANUFACTURED

LIME

Lime is an agglomerate product/natural chemical reagent, obtained through the decarbonation of limestone, by being subjected to high temperatures (900°C) in specific kilns for the purpose. This operation causes the following chemical reaction:

QUICKLIME



In Blocks

From the burning of the limestone (stonework type) in ancient kilns, quicklime forms in blocks. Blocks sized approximately 20-30 cm in diameter.

The product can be sold in packages of 5 kg, 30 kg, plastic barrels and in Bulk

Granulated

This type of lime is the result of its manufacture in industrial kilns, thereby initially obtaining a size of 4-10 cm. Other sizes can be obtained in accordance with customer demands.

The product can be sold in Bulk and in Big Bags.

Micronized

After it leaves the kiln, granulated quicklime is sent to a milling process, so as to be reduced into particles of some microns, turning it into a fine and homogenous powder.

The product can be sold in packages of 5 kg, 20 kg, 40 kg, in Bulk and in Big Bags.

Quicklime for Plaster

Special micronized quicklime for plaster works.

The product can be sold in packages of 40 kg.

Hydrated Lime

Hydrated lime (calcium hydroxide), also called slaked lime, is a product which is the result of the reaction between quicklime and water.

The product can be sold in packages of 22 kg, in Bulk and in Big Bags.





AGRICULTURE CORRECTORS OF pH



Agrical

This is a product based on quicklime. With a size of 2-5 mm, it can be supplied in bulk, in big-bags or in a bag of 30 kg (pallets with 40 bags). This corrector of acidity in soil, is applied on land using traditional fertiliser sprinklers. This product is characterised by the absence of dust during its application.

Agricultural Corrective

Agriculture corrective is a product based on calcium carbonate and hydrated lime to correct the soil acidity. With a size of 0-2 mm, it can be supplied in bulk, in big-bags or in a bag of 30 kg (pallets with 50 bags). It is applied on land using traditional fertiliser sprinklers.

MUD STABILISER

Calci

Product based on air and hydraulic binders and fly ash, it is used to stabilise waste mud landfills.

Linha INTOMIX

*Mortars for plaster, masonry.
Tile adhesives*

Product line called "Intomix", which includes mechanical projection plaster, finishing plaster, mortar for laying stonework and cement glue.

Following its strategy of innovation and diversification, Calcidrata has implemented a line of new pre-mixed products for the construction sector called INTOMIX, which includes projecting mortars for plaster, masonry mortar, among others.

This attitude was supported by the selection of technology underlying this range of products.

It is an Italian technology, used by one of the most important companies in this country to operate in the mortar industry and is now shared with us.

**INTOMIX,
A NEW WAY
TO BUILD**

These products have an added value which consists of avoiding the storage of raw materials on sites, thereby eliminating waste, maximising labour and guaranteeing high quality in the final application.

The products are presented in their dry form, ready to be applied in an efficient and functional manner with the help of a machine, which is easy to operate and which automatically pours the dosage of water needed.

At Calcidrata, we are aware that the INTOMIX solution has a great importance for applicers, which is why we are concerned in presenting solutions most suited to their needs.



NX2 Grey

Dry, ready to use plaster mortar, grey, for interiors and exteriors, applied by means of mechanical projection.

30 kg/bag

NX2 White

Dry, ready to use plaster mortar, white, for interiors and exteriors, applied by means of mechanical projection.

30 kg/bag

NX2 Hidro Grey

Dry, ready to use plaster mortar, water repellent, grey, for exteriors, applied by means of mechanical projection.

30 kg/bag

NX2 Hidro White

Dry ready to use plaster mortar, water repellent, white, for exteriors, applied by means of mechanical projection.

30 kg/bag

Fx2 White

Dry, ready to use plaster mortar, for finishing, white, manual application for interiors and exteriors.

30 kg/bag

AX2 Grey

Dry ready to use masonry mortar, grey, for laying stonework (tiles, blocks, ...)

30 kg/bag

INTOMIX AX2 white

Dry ready to use masonry mortar, white, for laying stonework (tiles, blocks, ...)

30 kg/bag

INTOMIX AX2 Hidro Grey

Dry, ready to use masonry mortar, water repellent, grey, for laying stonework (tiles, blocks, ...)

30 kg/bag

INTOMIX AX2 Hidro White

Dry, ready to use masonry mortar, water repellent, white, for laying stonework (tiles, blocks, ...)

30 kg/bag

Mfino

Dry, ready to use render mortar, white, for rendering interior walls

25 kg/bag

CC Grey

Tile adhesive , grey, Type C1

25 kg/bag

CC White

Tile adhesive , white, Type C1

25 kg/bag

Flexicola Grey

Tile adhesive, flexible , grey, Type C2 E

25 kg/bag

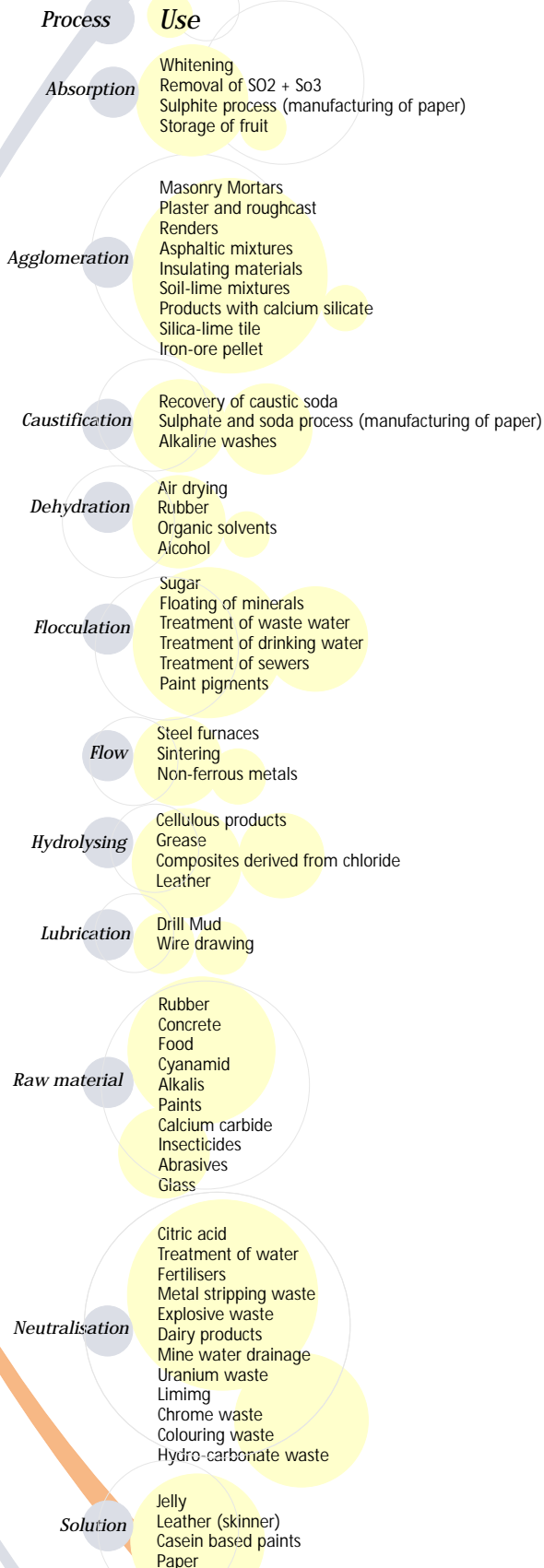
Flexicola White

Tile adhesive, flexible , white, Type C2 E

25 kg/bag



APPLICATIONS



There are multiple applications for lime, such as civil construction and public works, chemical industry, solid waste treatment, treatment of water for public supply, treatment of waste water, manufacturing of sugar, mineral activities, manufacturing of paper, production of caustic soda, production of steel, agriculture, ...

Actually, there is no other product which is as versatile as lime. Its properties allow it to carry out neutralising, flocculation, caustification, agglutination, lubrication and absorption functions, among others.

Quicklime and hydrated lime are constantly being studied and investigated for multiple and new applications.

MINERAL ACTIVITIES

Lime is used in the recovery of metals. It also has an important role in controlling the pH in the waste water from this industry.

ENVIRONMENT

Recently, special attention has been given to the deterioration of the environment. Acid rain and toxic and dangerous industrial waste have contributed to worsen this situation. Lime helps solve these problems. Its alkaline content, its low costs and ease to work with are fundamental characteristics of this product.





APPLICATIONS

WATER

It is used to control the pH, it precipitates phosphates and nitrates. It eliminates odours and immobilises toxic metals. Hydrated lime is a harmless product in any technique to purify water.

PAPER

In this industry, lime is used as a cautory. It is also used as a whitening agent and to treat waste water.

AGRICULTURE

Lime, or the correctives, are the fertilisers of choice for acidic and clay soils. The effective neutralising values obtain a practically instantaneous response from crops and harvests, thereby increasing the productivity of the fields.

ROAD AND PUBLIC WORKS

As a binder and a cementer, lime can stabilise clay soils which are not suitable for the construction of road surfaces, thereby making them able to support roads, avenues, parking, etc.

SUGAR

Lime is used to remove phosphate and organic composites and in its clarification.

CONSTRUCTION AND RESTORATION

There are centuries of experience in this area. Lime based mortars are long-lasting, do not crack, support climatic shocks, offer greater resistance to the propagation of sound, are better to work with and create an obstacle to the penetration of water - constructions' worst enemy





MANUFACTURING PROCESS



QUALITY CONTROL

The quality of our raw material and our final products are subjected to control in every stage of the process. It is the only way to be able to satisfy our clients' needs. Characteristics such as purity, humidity content, size, reactivity, etc., are considered when electing the best lime on the market.





THE MARKET

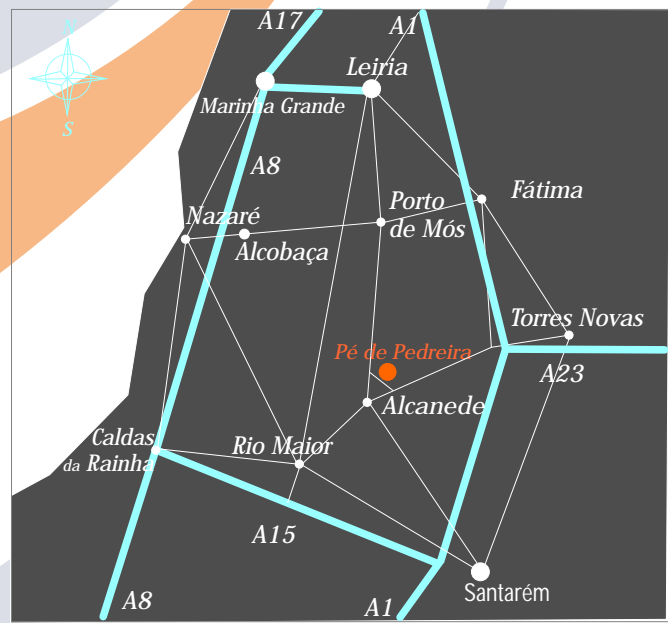
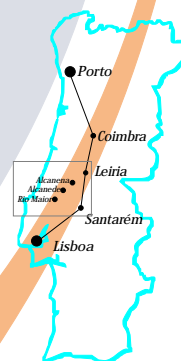
The market served by the production of our companies is extremely wide, diversified and heterogeneous. You can find our products anywhere in Portugal. We have recently widened the borders of our market and have paid special attention to Spain and Africa.

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