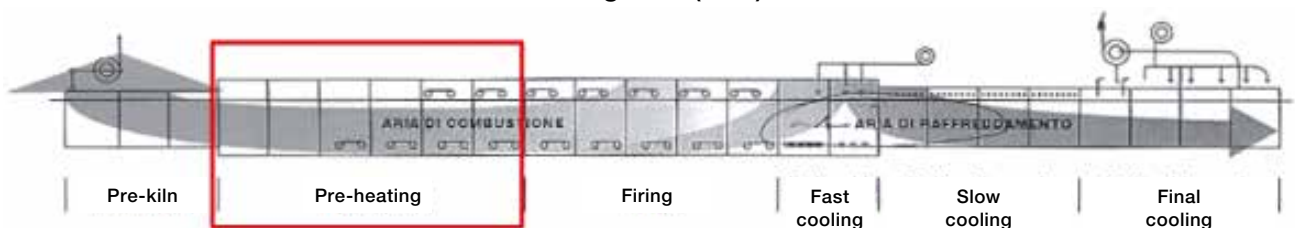
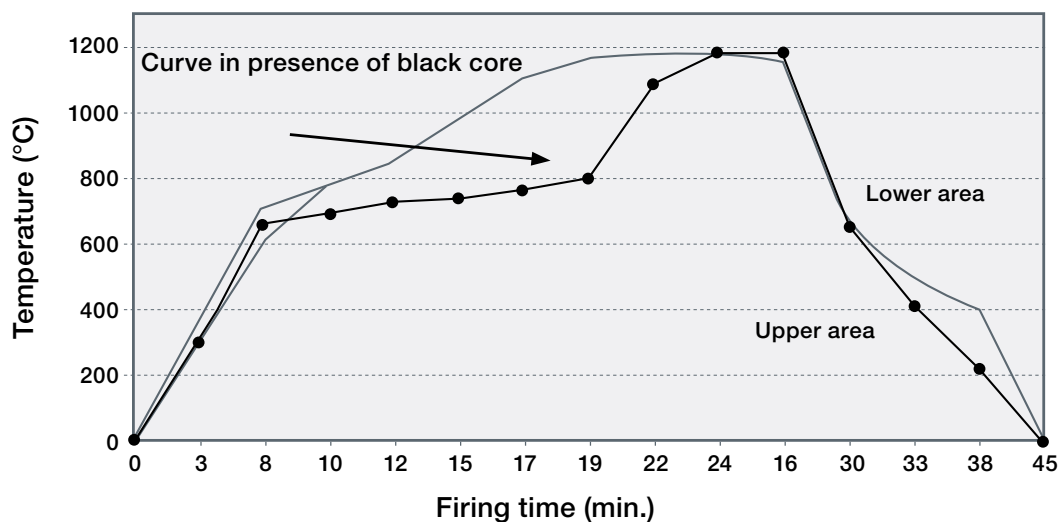


# OXY 587<sup>®</sup> ADDITIVES TO ELIMINATE OR REDUCE THE BLACK CORE

Producing without black core allows to improve the mechanical performances of the material, to eliminate the unaesthetic dark grey area inside the piece and, factor of primary importance, to reduce firing cycles increasing the productivity and reducing the costs.



The product OXY 587<sup>®</sup> has the great advantage of being a powder product, and it can be dosed with a normal dry colouriser.

This characteristic allows it to be used only in the types of material that manifest the problem of the black core and not on the whole production.

## OXY 587<sup>®</sup> ANTI-BLACK CORE

The problem known as “black core” has always accompanied the technological evolution of our sector.

The design innovations that have allowed the firing in a single solution, the research for increasingly cheaper mixtures, but above all constantly faster firing cycles, have forced the technologists to continually face this difficult problem.

This particular defect has been extensively studied and we know it is caused by the organic substances particularly present in clays. These minerals originated from the erosion of magmatic rocks and the subsequent deposit in lagoon and/or lake environments.

In this cyclic stratification the newborn clay formations have had the opportunity to trap inside them the organic substances deriving from the decomposition of organisms which, once their life cycle was over, were deposited on the seabed.

In modern firing cycles, when these hydrocarbons do not come into contact with a sufficient quantity of oxidizing substances, unfavorable conditions develop and the carbon oxidizes at the expense of other elements, among which the sulfur which thus remains blocked inside the ceramic body, originating the classic central bulge of dark gray color.

The research allowed to identify some possible solutions, among which one of the most effective is proposed by **Mistral Italia**.

Our company has developed a suitably modified product, able to adhere perfectly to the spray-dried product; this allows to work with very low percentages of additive and to obtain a perfectly homogeneous dispersion of the material. The choice of the powder product offers many other advantages, among which:

- **Additivation by simple dry mixing**
- **The possibility of intervening on small lots of material**
- **Avoid any rheological problems in the slip**
- **Easy storage.**

**Given the indisputable effectiveness of the proposed solution, Mistral decided to cover its work and research with a patent.**

## TECHNICAL SHEET

### **OXY 587®** **Oxidizing powder**

#### **CHEMICAL-PHYSICAL CHARACTERISTICS**

**Chemical base:** mixture of inorganic salts

**Appearance:** white fine powder

**Solubility:** water-soluble

**Density:** approx. 0.65 gr/cm<sup>3</sup>

#### **PROPERTIES AND APPLICATIONS**

**OXY 587®** is an additive used to remove the black core from the composition of the mixtures.

The black core derives from the non-oxidized organic C inside the body of the tile, mainly due to the fast firing cycles and unfavorable atmosphere inside the kiln.

**OXY 587®** provides components which favor the oxidation of C to carbon dioxide (CO<sub>2</sub>), thus allowing its easy dispersion inside the kiln atmosphere.

The product comes in the form of powder and can be added before pressing, just like a pigment for the external coloring of the granules. In plants with dry grinding the product can be added at any time of the mixture production process.

The percentages of use are 0,1-0,6%.

#### **HANDLING AND STORAGE**

During handling it is recommended the use of suitable protections (mask and glasses).

For storage it is recommended to store the product in a dry and ventilated place and to keep it closed inside its original container.

Keep away from heat, sparks, flames and other sources of ignition.

Compatible materials: steel and synthetic materials.

#### **PACKAGING AND LIFETIME**

**OXY 587®** is available in 25 kg bags on 600 kg pallet, 500 kg big-bag on pallet.

If properly stored, it has a lifetime of 12 months.



**Mistral ITALIA s.r.l.**

Via Tiziano, 12 - C.P. 42014 Castellarano (RE) - Italy

Tel. +39 0536 813066 - Fax +39 0536 813073 - P.IVA e C.F. 03854670365

info@mistralsrl.net - [www.mistralsrl.net](http://www.mistralsrl.net)

—CERTECH GROUP—