



NUBICEM

Ultramarine Blues specifically
designed for cementitious
formulations



nubiola

inorganic pigments

NUBICEM



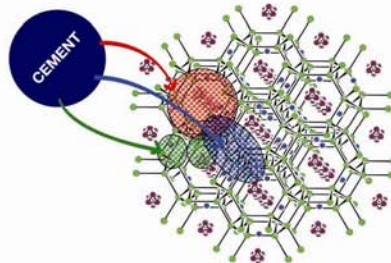
Why not in Ultramarine Blue?

An Ultramarine Blue structure alteration takes place during the setting of the cement due to several chemical reactions*, where the pigment loses its color.

The new encapsulation technology of the Nubicem range, specifically developed for cementitious products, keeps all Ultramarine Blue properties and its unique color intact by preventing the cementitious matrix attack on the Ultramarine Blue particle.

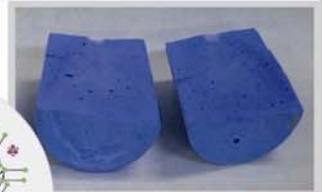
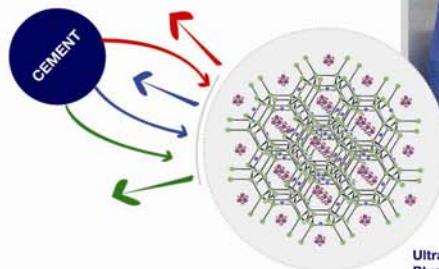
*Cementitious Matrix Interaction

Conventional Ultramarine Blue






Ultramarine Blue Structure

Nubicem



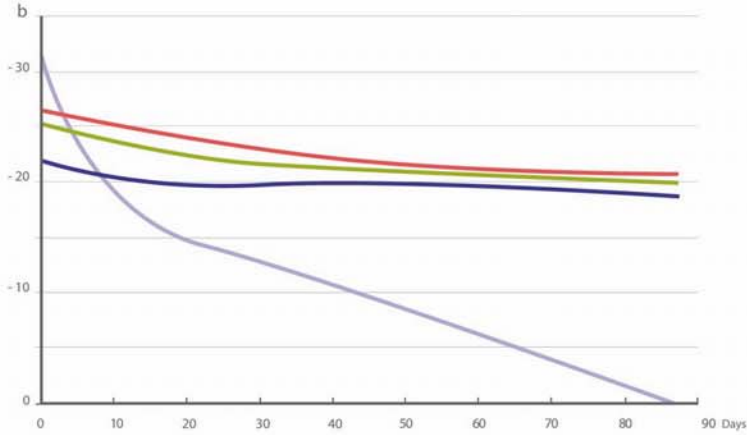
Ultramarine Blue Structure

-  S Destruction of the Ultramarine Blue cage with oxidation of the chromophore (S₃)
-  Na Calcium Sodium ion exchange
-  Si/Al Chemical reaction between calcium hydroxide + calcium aluminum silicate and Ultramarine Blue

NUBICEM technical tests

ACCELERATED OUTDOOR EXPOSURE TEST¹

White cement BLI 52.5R – water / cement 0.5 – cement / sand 1:3; 5% pigment - Siliceous sand (CEN-NORMSAND DIN EN 196-1). No water-proofing admixture or redispersible powder used.



Setting 24h 20°C 95%HR
Curing 7 days HR 100%

QUV test
UV-B (313nm)
ISO 4892-3
1 cycle:
5h radiation – 40°C
1h condensation – 50°C
4 cycles a day

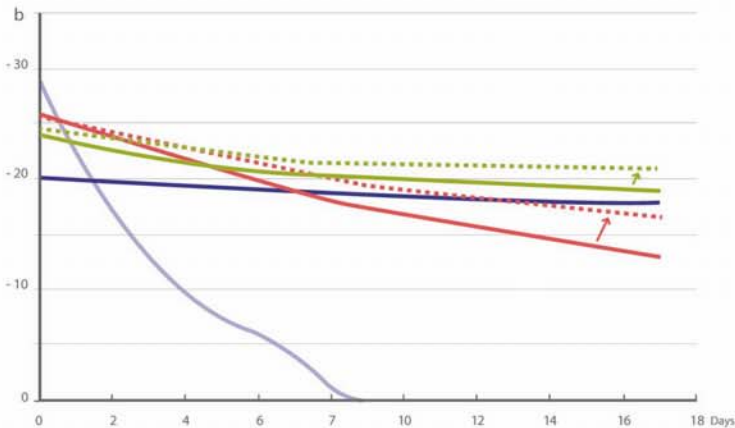
NUBICEM B-201
Pigment Blue 28 - Cobalt Blue
NUBICEM B-101
Conventional UBM

Color does not significantly change after 83 days* of accelerated outdoor exposure.

* 83 days is equivalent to the radiation of 10 years' Light exposure at room temperature.

ACCELERATED RAINFALL SIMULATION TEST¹

White cement BLI 52.5R – water / cement 0.5 – cement / sand 1:3; 5% pigment - Siliceous sand (CEN-NORMSAND DIN EN 196-1). No water-proofing admixture or redispersible powder used.



Setting 24h 20°C 95%HR
Curing 7 days HR 100%

Artificial Rainfall Test
1 cycle:
2h artificial rain
4h drying at room T
4 cycles a day

.....results using hydrophobic admixtures or redispersible powder
NUBICEM B-201
Pigment Blue 28 - Cobalt Blue
NUBICEM B-101
Conventional UBM

Color does not significantly change after 18 days* of accelerated rainfall simulation. Although a better performance is observed in Nubicem B-201

*18 days is equivalent to 10 years in North-West Spain (annual rainfall 1388 mm) and 86 years in Southern Spain (annual rainfall 200 mm).

¹Test done by Instituto de la Construcción Eduardo Torroja – CSIC Madrid.

NUBICEM range

Nubicem B-101

Ultramarine Blue

Recommended for indoor use in a wide range of applications, as well as for outdoor applications when the contact with water is not severe, in dry areas or when the formulations are highly hydrophobic.

Nubicem B-201

Ultramarine Blue Modified with Cobalt Blue

Recommended for all kinds of indoor and outdoor applications; it provides an added touch for your most demanding applications.

key **BENEFITS**

New blue color that gives you greater flexibility in architecture design

The most cost effective Blue coloration

Less dosage / higher strength compared to Pigment Blue 28 (Cobalt Blue)

Possibility of using it in color formulations without raising the formulation price

White correction effect to avoid the yellow undertone of white color



APPLICATIONS

Colored mortar / Stucco / Plaster

Colored Concrete

(Ready-Mix Concrete, Pre-Cast Concrete)

Colored grout joints for ceramic tiles

Cementitious floors / roads

Suitability for non-cementitious formulations too:

- Highly-alkaline coatings
- Coatings over highly alkaline substrates
- Formulations based on lime



**EUROPE, MIDDLE EAST,
NORTH AFRICA & SE ASIA**
nubiola@nubiola.com

LATIN AMERICA
nubiola@nubiola.com

INDIA & PAKISTAN
nubiola@nubiola.com

EASTERN EUROPE
nubiola@nubiola.com

NORTH AMERICA
nubiola@nubiola.com

JAPAN & KOREA
nubiola@nubiola.com

CHINA
nubiola@nubiola.com

**SOUTH AFRICA, AUSTRALIA &
NEW ZEALAND**
nubiola@nubiola.com



www.nubiola.com

Disclaimer for commercial products

Nubiola can only guarantee those certified parameters in the Specification Data Sheet of our products. Nubiola is not responsible for any misuse and/or inappropriate handling or storing conditions that may act to the detriment of certified specifications of our products or pose a risk to human health or the environment.

Due to the fact that there are a multitude of formulations, manufacturing processes and end uses, Nubiola strongly recommends that customers perform previous tests under their own testing program and carry out appropriate verifications in order to determine the ultimate suitability of our products and observe existing laws and legislation.

March, 2009

