

## QL Nano Lithium

Chemical/mechanical hardener, anti-dust, nano-technology, non-pellicular



A non-film chemical/mechanical nano-technological hardener with a base of lithium silicates for cortical consolidation, chemical surface hardening and anti-dust treatment of recently-constructed industrial concrete flooring. QL Nano Lithium must be applied on the surface of the floor, immediately after finishing with mechanical bladed trowels. Once the product has been absorbed, it is possible to polish the treated surface using specific polishing machines.

**CUSTOMS CODE:** 3824 9970

**COMPONENTS:** Single-component

**APPEARANCE:** Liquid

**AVAILABLE COLORS:** Transparent

**PACKAGING AND DIMENSIONS:** Plastic can 5 l - Plastic can 25 l

### OBTAINED CERTIFICATIONS AND REGULATIONS



### FEATURES AND BENEFITS

It is the most significant progress in the saturation and the reinforcement of concrete floorings in the last 50 years, it has always been used in the United States. The "nanotechnology" of QL Nano Lithium, which is a real improvement with respect to sodium silicate and extremely performant as a reinforcing agent for concrete, has allowed us to achieve levels of performance that were previously unimaginable. The product also presents the following characteristics: -It significantly limits (90%) the cracks of the flooring during hardening. - This is the only chemical hardener that helps to alleviate and prevent the alkali-silica reaction ("alkali-aggregate reaction" or ASR). - It completely replaces the armour with quartz dusting. It does not crack, it does not detach, it creates a film, it does not bubble. - The extraordinary contribution to the deep reinforcement, makes the surface of the concrete completely dust-proof and highly resistant to abrasion. The continuous use of the flooring contributes to continuously improving the surface gloss without altering slipperiness in the least. - It is in an aqueous solution and does not contain solvents. It is odourless, non-flammable, non-toxic, it does not fear the freezing and thawing cycles, it is not carcinogenic and does not contain volatile substances (VOC Free) and can also be used in closed premises. - Compatible with other materials like: epoxy resins, polyurethane resins, acrylic resins, etc.. - It is UV resistant and remains stable over time.

### FIELDS OF APPLICATION

Anti-dust hardening treatment, for industrial flooring and concrete slabs, both old and new, both grey and coloured.

### ALLOWED SUPPORTS

Concrete - Floor screed



## PREPARATION OF SUPPORTS

Application surfaces should be clean, free of soiling, crumbling and non-adhering parts, dust, etc., conveniently saturated with water until they reach the condition "saturated with dry surface".

## MODE OF USE

In case of new flooring, it can be applied as soon as the surface of the industrial flooring is walkable, without superficial water residue. Shake the product before use. Apply the product by low pressure airless, evenly without creating puddles, completely saturating the surface for a consumption of 70 g/m<sup>2</sup> approximately. It is advisable, after about 7-10 days, to wash the surface floor polisher provided with a black pad to eliminate any excess product, thus obtaining an elegant semi gloss (opaque) effect of the flooring, by polishing the lithium crystals on the surface.





## APPLICATION METHODS




Low pressure airless nebulizer - Scrubbing brush - Sprayer

## TOOL CLEANING

Water

## KEY FEATURES

-  Density: 1.11 kg/dm<sup>3</sup>
-  Highlighted product
-  Shelf-life: 12 months
-  UV-resistant

-  Dosage: 70 (+- 10%) g/m<sup>2</sup>
-  Nonflammable
-  Solvent-free

## CONSUMPTION

Approximately 0,07 litres of QL Nano Lithium for every square metre of surface to be treated.

## STORAGE AND CONSERVATION

Protect from freezing. Store the product in its original packing, in a fresh and dry environment, avoiding frost and direct sunlight. Inadequate storage of the product may result in a loss of rheological performance.



## PHOTO GALLERY



## SPECIFICATION ITEM

The chemical/mechanical hardening, anti-dust, non-pellicular, of the surface of the concrete paving, must be made by application with low pressure airless pump, for a quantity of about 70 gr/sqm, QL Nano Lithium by AZICHEM srl, based on Lithium Silicates in nano-technology.



## ADDITIONAL CONTENT



### ABRASION TEST

The abrasion test was done according to ASTM standards on a standard of 6 samples of cement mix. One sample was not treated, one sample was treated with QL Nano Lithium and one was treated with one of the best sodium silicates present on the market. An abrasion with a disc grinding of 4.5 inches in diameter was performed. The samples were then weighed before and after to determine the weight loss.

	BEFORE	AFTER	LOSS	STRENGTH
Comparison	388.8	385.7	3.1	--
Sodium Silicate	425.3	423	2.3	+29%
QL Nano Lithium	411.1	409.4	1.7	+45%

### ABSORPTION TEST

NORM	CONCRETE	NON-TREATED	REDUCTION
RILEM 25 PEM	CEN 1766 C 0.70	4.1 (100%)	0.4 (-85%)
EN 1062/3	CEN 1766 B 0.25	0.4 (100%)	0.2 (-50%)

### HARDNESS TEST

TEST	CONCRETE	NON-TREATED	TREATED	INCREASE
MOHS SCALE	C 0.70	3	6.5	+115%
MST	B 0.25 + QUARZ	6.5	8.5	+35%
MST	B 0.25	5	8	+60%

## WARNINGS AND PRECAUTIONS

The general information, along with any instructions and recommendations for use of this product, including in this data sheet and eventually provided verbally or in writing, correspond to the present state of our scientific and practical knowledge. Any technical and performance data reported is the result of laboratory tests conducted in a controlled environment and thus may be subject to modification in relation to the actual conditions of implementation.

Azichem Srl does not assume any liability arising from inadequate characteristics related to improper use of the product or connected to defects arising from factors or elements unrelated to the quality of the product, including improper storage. Those wishing to utilise the product are required to determine prior to use whether or not the same is suitable for the intended use, assuming all consequent responsibility.

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