



RBnano  
Mineral Ink

RBnano  
Coating

RBnano  
Colors

## Welcome to the RBnano family Products !

*Let yourself be won by the products of the nano world*

*Our products will convince you that some providers are missing*

**Markings from nano to macro,  
Nano-metrology,  
Surface treatment,  
Sensors development  
Colored nano-coatings**

**Get higher productivity**

Minimize your manufacturing process  
With green process  
Consuming less raw material  
Simplifying your technical process

**Find your pay-back**

By reducing production costs  
By reducing your maintenance costs  
By getting high standard of quality

### The family of Inks RBnano-MINK

End using	RBnano-HARC	Hard Coating
	RBnano-MCC	Metal Color Concept
	RBnano-PCC	Plastic Color Concept
	RBnano-SCC	Surface Color Coating
	RBnano-ITO	Indium Tin Oxide sol-gel flowable conductive coating
	RBnano-HYB	mineral-organic Hybride coating
	RBnano -TAG	nano targets or Tags for metrology at nanolevel

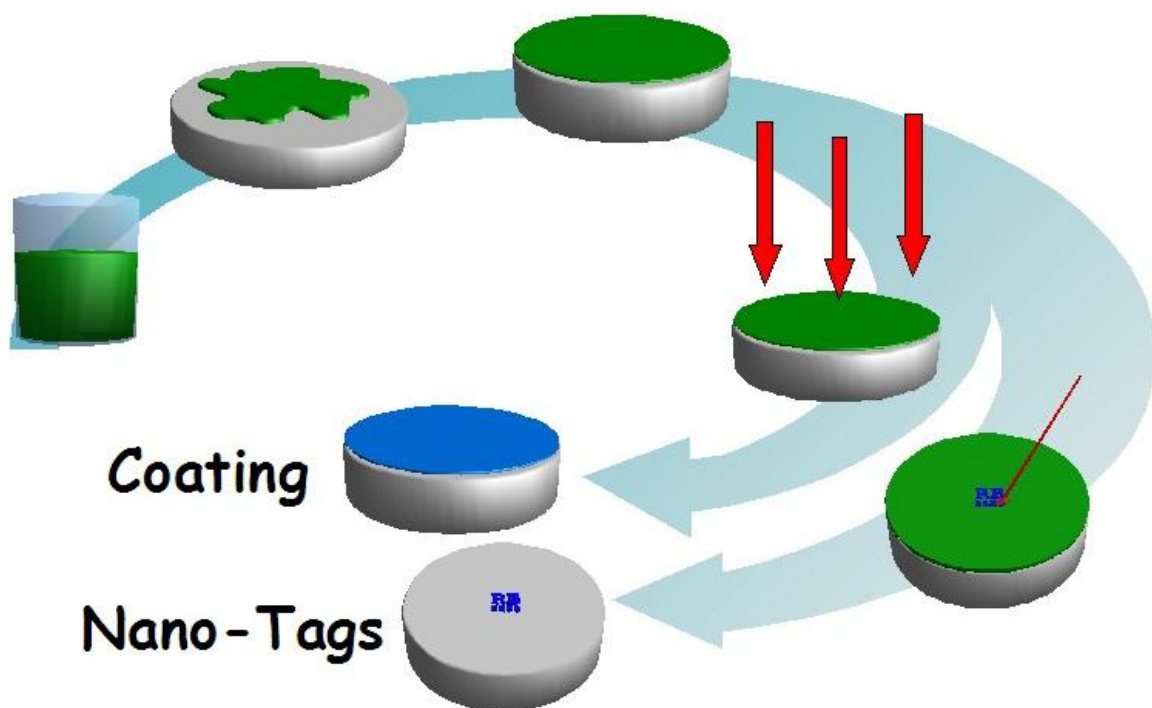


# The Family of RBnano-MINK Mineral Ink

Our exclusive process uses the inks of the family **RBnano MINK** to treat or coat your surfaces with functional materials. Based on soluble oxide precursors, **RBnano Inks**, can be easily mineralized into an oxide by energy input, in the open air **Without vacuum** device. It can be used either in **markings, coatings** or **surface treatments** and provide functional ceramic properties such as hardness chemical resistance, magnetism, conductivity, color...

**RBnano MINK** can be treated by a concentrated laser beam to develop markings of an extreme thinness (20nm). The product **Id'hol**, identification hologram, is one of the innovations that results from this capability.

The process of turning your surfaces coatings into a functional ceramic material is made by **RBnano MINK** by LT curing. The ink is sprayed and turned into an oxide layer by mineralization process since 180°C, no vacuum, with good adhesive properties on all materials. It is a substitution process for type methods such as PVD process.



## Available compounds

$Fe_2O_3$ ,  $Al_2O_3$ ,  $SiO_2$ ,  $ZnO$ ,  $SnO_2$ ,  $In_2O_3$ ,  $TiO_2$ ,  $ZrO_2$ ,  $Ln_2O_3$ ,  $CoFe_2O_4$ ,  $BaTiO_3$ ,  $PbTiO_3$ ,  $BaAl_2O_4$ , ITO,  $Y_2O_3/Eu$  (rouge),  $ZnSiO_4/Mn$  (vert),  $(BaMg)Al_2O_4/Eu$  (bleu), semiconductors (CdS, CdSe, ZnS, PbS ...), metallic deposit.

## Product support

Silicium, glass, glass-ITO, ceramics, sapphire, steel, aluminum, noble metals, plastic, flat or curved support!

## End applications

markings from nano to macro  
Hot and wet corrosion coatings  
Chemical attack protection on metallic or vitreous surfaces  
Sensor development  
catalysts  
Adhesion enhancement  
flattening.

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# RBnano-NanoTags

The brand line of inks issued from the family of RBnano MINK are used to shape nano-scale markings.

Having done ink deposit on the object we use an intense beam of energy (laser, electron) to mineralize the matter locally.

Removal of unaffected ink is done easily by water washing.

Mineralized marks keep stamped on the surface and their thickness can vary from 20nm to 200nm.

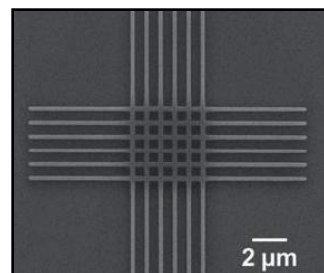
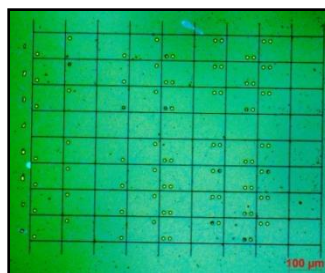
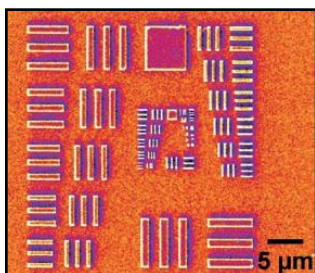
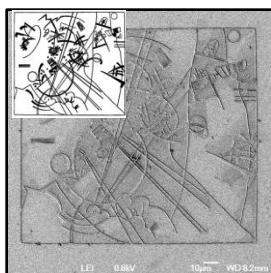
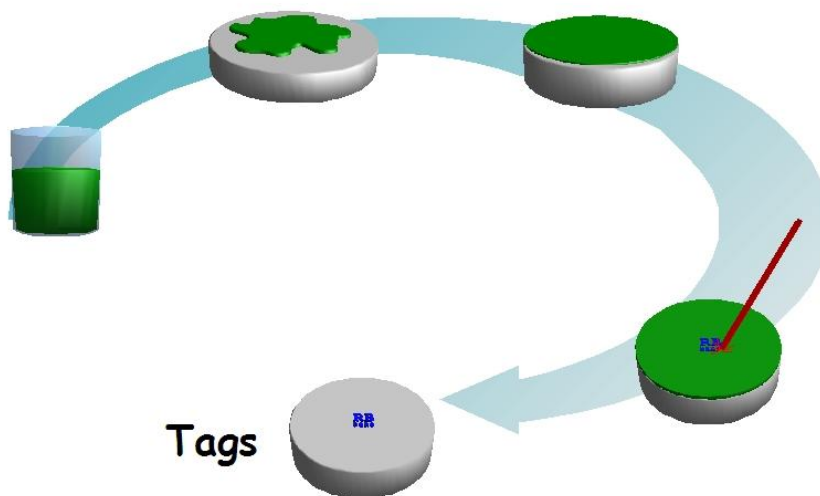
This technique allows to shape easily:

- Nano-targets,
- Tools of calibrations for microscope
- Measuring and tracking tools in micro-mechanics.
- Diffractive optical elements.

It is also a new and original technique to prevent chemical reactions, and it is easy to use !

Supply of functional materials ( magnetic, optical, dielectric...) in very accurate areas allow us to create original sensors and realize low cost productions for a limited number of items.

We are able to manage with objects of all sizes and we have the know-how needed to answer all your requirements.



## Available compounds

Fe<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, ZnO, SnO<sub>2</sub>, In<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub>, ZrO<sub>2</sub>, Ln<sub>2</sub>O<sub>3</sub>, CoFe<sub>2</sub>O<sub>4</sub>, BaTiO<sub>3</sub>, PbTiO<sub>3</sub>, BaAl<sub>2</sub>O<sub>4</sub>, ITO, Y<sub>2</sub>O<sub>3</sub>/Eu (red), ZnSiO<sub>4</sub>/Mn (green), (BaMg)Al<sub>2</sub>O<sub>4</sub>/Eu (blue), semiconductors (CdS, CdSe, ZnS, PbS ...), gold deposits.

## Product support

Silicium, glass, glass-ITO, ceramic, sapphire, steel, aluminum, precious metals, plastics, any shape any roughness and forms!

## End applications

Tags from micro to nano, targets, grids, mask, calibration grids in sub micron range, DOE, sensors.

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# RBnano-MCC Metal Color Concept

We used RBnano-MINK to produce colored coatings which can be sprayed in very thin layers in such a way as to show the product support underneath.

It is a **polished metal coating** close to anodisation aluminum but no drenching is needed. **RBnano-MCC** can be easily sprayed on all metallic surfaces, polished or brushed.

RBnano is involved in environmental concerns. Our green process don't generate toxic waste, no sewage to recycle.



- Uses**
- wide range of colors
  - transparent surface allows texture support to be seen through.
- Product support**  
brushed
- aluminium, titanium, stainless steel ,brass, nickel-brass, brass-plated (polished or brushed)
- Technical guarantees**
- wide range of colors available
  - resist at pencil test: hardness 5H
  - resist at ultraviolet test 365nm /24h
  - watertight, stand up to alcohol and acetone
- Application procedure**
- can be sprayed, stamped or soaked
  - fast drying (from 15s to 2min)
  - curing temperature between 80°C and 200°C
  - no heavy, toxic or polluting solvent
- Fields of application**
- Watch industry, jewellery, hands, case, strap, face
  - architectural design, hardware business,
  - design, furniture

***RBnano provides also mineral precursors in lithography, electronics, hard antireflective coating monolayer for glass and saphir, ITO sol-gel inks and is able to develop any kind of special mineral ink for any application***

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## RBnano-PCC Plastic Color Concept

We used **RBnano-MINK** to produce colored coatings which can be sprayed in very thin and hard layers in such a way as to show the product support underneath. It is a **coating for structured plastic surfaces**. **RBnano-PCC** can be easily sprayed or stamped on all polymer surfaces. Provides deep colors, without thick dye layer.



<b>Uses</b>	<ul style="list-style-type: none"><li>-wide range of colors</li><li>-do not affect texture</li></ul>
<b>Product support</b>	<ul style="list-style-type: none"><li>- PP, ABS, Nylon, PC, PMMA</li></ul>
<b>Technical guarantees</b>	<ul style="list-style-type: none"><li>-wide range of colors available</li><li>-resist at pencil test: hardness 5H</li><li>-resist at ultraviolet test 365nm /24h</li><li>-watertight, stand up to alcohol and acetone</li></ul>
<b>Application procedures</b>	<ul style="list-style-type: none"><li>-can be sprayed, stamped or soaked</li><li>-fast drying (from 15s to 2min)</li><li>-curing temperature between 50°C et 200°C</li><li>-no heavy, toxic or polluting solvent</li></ul>
<b>Application fields</b>	<ul style="list-style-type: none"><li>-watch industry, case, hands, strap, face</li><li>-jewelry</li><li>-design, furniture, adornment</li><li>-markings on plastic supports</li><li>-car industry</li></ul>

***RBnano provides also mineral precursors in lithography, electronics, hard antireflective coating monolayer for glass and saphir, ITO sol-gel inks and is able to develop any kind of special mineral ink for any application***

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