Clean & Protect
What is NANO-CERAMIC Thin Film Coating?

NANO-CERAMIC is a revolutionary, ultra-hard and long-lasting ceramic surface coating that provides superior scratch resistance and semi-permanent protection for all factory aircraft paints and for all aerospace materials like aluminum and carbon.

What makes NANO-CERAMIC Thin Film Coating so different?

NANO-CERAMIC forms super-durable molecular bond with the surface and is more than 4 times stronger than traditional clear coating. This allows NANO-CERAMIC to effectively absorb damage that would otherwise affect the factory paint, significantly diminishing the formation of swirl marks and light scratches and protecting and preserving the factory paint from environmental damage and corrosion, which can cause major maintenance issues over time.

Conventional paints are simply not strong enough and turbine blades are easy corroded.

Commercial planes are normally painted every seven to ten years and they have to be stripped of the old paint before any new paint can be applied. The costs are enormous and weigh heavily on the overall maintenance costs.

NANO-CERAMIC is completely resistant to acidic environmental substances, such as bird droppings and acid rain, and to oxidation, unlike your factory aircraft paint and aluminum parts which can be permanently damaged.

NANO-CERAMIC will not etch or dissolve when in contact with harmful substances like salts, fuels, and hydraulic fluids, maintaining the clean and original surface.
What are the benefits of applying NANO-CERAMIC Thin Film Coating?

NANO-CERAMIC will provide aircraft with a superior clear coat film that, on winglets, can withstand 600+ mph winds at 30,000 feet above the earth. It is resistant to chemical etching, is much harder than factory aircraft coatings, will reduce swirl marks and scratches, and has a semi-permanent hydrophobic surface that is much easier to clean, and stays cleaner longer. Even chrome, aluminum, and other metals can have added protection, as our coatings can withstand temperatures of over 1000°C/1800°F.

Cleanliness and smoothness of the aircraft fuselage, together with our thin ceramic coating on the turbine blades, which allows a higher operating temperature in the turbine, by preventing thermo-mechanical fatigue failure (TMF) cracks, are the main drivers for fuel savings or penalties.

Step 1 Surface layer of factory clear coat is damaged and contaminated.

Step 2 Technician decontaminates and polishes clear coat to produce a smooth and even surface.

Step 3 Coating thickness will be restored with a superior NANO-CERAMIC layer.
What is NANO-CERAMIC Permanent Coating?

NANO-CERAMIC permanent coating is the latest generation of protective coating which transforms paint into a hard ceramic, providing superior scratch resistance and permanent protection for all exterior surfaces. (except turbines)

NANO-CERAMIC permanent coating is 300°C resistant and more than 6 times stronger than traditional acrylic based paint finishes, and is effectively preventing damage that would otherwise affect the appearance and integrity of the original surface.

Zero Maintenance for decades to come!

Our NANO-CERAMIC permanent coating is rigorously tested by an independent testing laboratory according to the European standard for outdoor paints (EN 1504-2) please find the test report on page 19.

Can NANO-CERAMIC Permanent Coating be applied on any surface?

The NANO-CERAMIC permanent coating can be applied directly or indirectly on all kinds of interior and/or exterior surfaces (absorbing and non-absorbing), such as gelcoats, steel, wood, acrylic and many more.

Is NANO-CERAMIC Permanent Coating self-cleaning?

NANO-CERAMIC permanent coating provides a permanent hydrophobic surface that is self cleaning, easier to clean and stays cleaner longer as water and dirt can not penetrate the ceramic layer. NANO-CERAMIC permanent coating is resistant to water vapor and water absorption.
Cross Section of Coating System

SI03 Max Gloss
SI05 Max Matte

SI11 Permanent Gloss
SI12 Permanent Matte

Epoxy
Acrylic
Polyurethane
(conventional car paint is a mixture of Acrylic-Urethane)

Zinc Rich Primer
(if corrosive circumstances)

There is no better option than protecting your fleet with a NANO-CERAMIC Thin Film or Permanent Coating!

Do not wait till the surface get worse, most easy is to apply wipe or spray when the surfaces are still in new or in nearly new condition and the cost do not outweigh the benefits.
Thin Film Protection Plan for Aircrafts Fuselage, Windows and Turbine Blades

- **SIO5 Max**
  - Diamond Gloss
  - 5-Year+ Protection
  - Hydrophobic
  - Micro-Scratch-Resistant
  - H9+++  

- **SIBC**
  - Gorilla Basecoat
  - Non-Hydrophobic
  - Semi Permanent Protection
  - H9+++  
  - Gelcoat Hardener

- **SIO3 Max**
  - Ultra Wet Look Gloss
  - 5-Year+ Protection
  - Hydrophobic
  - Scratch-resistant
  - H9++  

- **SIO2**
  - Safety Vision
  - WINDSHIELD COATING

- **SIRP**
  - Windshield Maintenance
  - 3-MONTH CYCLE  

- **SHRE**
  - Pure Shine Shampoo

- **MPCL**
  - Multi Purpose Interior Cleaner

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**NANO-CERAMIC®**
THE NEW GENERATION COATINGS

NANO-CERAMIC.COM
Permanent Coating Protection Plan for Aircrafts Fuselage and Windows

SI11
Gloss
Transparent Sprayable 2-Component
30 Years+ Protection
Permanent Hydrophobic Scratch-resistant H9+++ 

SI12
Matte

SIRP
Windshield Maintenance
3-MONTH CYCLE

SHRE
Pure Shine Shampoo

MPCL
Multi Purpose Interior Cleaner

NANO-CERAMIC®
THE NEW GENERATION COATINGS
NANO-CERAMIC.COM
SIO3 MAX GLOSS

Body & Windshield Protection
Incl. Turbin Blades

Product ID: SIO3150-MAX-GLOSS 3x50 ml 10 Micron
Consumption: +/- 2 ml/m²
Reachable area: +/- 25m² Body + 25m² Windshield
Used for: Gelcoat, acrylic, aluminium
Application field: Aviation

Your aircraft will stand out! This Kit-Set contains all to protect your plane with a High-Tech ceramic thin film coating.

- Two simple steps: Clean with our Steril Cleaner and Apply
- The original surface is protected against corrosion.
- Makes the surface anti scratch, much easier and quicker to clean, and the adhesion of dirt is reduced drastically.
- Save on fuel because smoother fusilage and on repaints.
- Our thin film coating on the turbine blades allows a higher operation temperature in the turbine which improves the fuel yield

This coating has an outstanding hydrophobic effect, and the surface stays cleaner longer. Cleaning intervals as well as the formation of water spots will be greatly reduced.

Lasts for 5 Years+ (2 Years on Glass)
SIO5  MAX MATTE

Body & Windshield Protection
Incl. Turbin Blades

Product ID  : SIO5150-MAX-MATTE 3x50 ml  5 Micron
Consumption : +/- 2 ml/m²
Reachable area  : +/- 25m²  Body + 25m²  Windshield
Used for  : Gelcoat, acrylic, aluminium
Application field : Aviation

Your aircraft will stand out! This Kit-Set contains all to protect your plane with a High-Tech ceramic thin film coating.

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Lasts for 5 Years+ (2 Years on Glass)
SI11 2-Component (2K)

Ceramic Coating Transparent for Glossy surfaces

Product ID: SI111000 1L / 1.050 gr
           SI112500 2.5L / 2.600 gr

Spray Thickness: Body 50-75 micron
Reachable area: 1050gr Body +/- 10m²
Used for: Gelcoat, acrylic, aluminium
Application field: Aviation

SI11 is an incredibly strong 2-component paint system which forms a durable matrix of molecular bonds (transformation to ceramic) resulting in permanent protection of the surface.

Three simple steps: Clean, Dry, and Apply.

- Easily repels water, dirt, dust, and pollutants.
- This coating is permanent hydrophobic.
- Restores damaged finishes and reduces cleaning intervals.
- Save on fuel and repaints.
- Superior anti-pollution and anti-corrosion properties.
- This coating can withstand temperatures of 300°C.

Will last permanently for up to 30 years+.
SI12 2-Component (2K)

Ceramic Coating Transparent for Matte surfaces

Product ID : SI111000 1L / 1.050 gr
SprayThickness : Body 50-75 micron
Reachable area : 1050gr Body +/- 10m²
Used for : Gelcoat, acrylic, aluminium
Application field : Aviation

SI12 is an incredibly strong 2-component paint system which forms a durable matrix of molecular bonds (transformation to ceramic) resulting in permanent protection of the surface.

Three simple steps: Clean, Dry, and Apply.

• Easily repels water, dirt, dust, and pollutants.
• This coating is permanent hydrophobic
• Restores damaged finishes and reduces cleaning intervals.
• Resistant to all kinds of chemicals and UV radiation.
• Save on fuel and repaints.
• This coating can withstand temperatures of 300°C.

Will last permanently for up to 30 years+.
Only this High Quality Polish Compound together with the recommended pads assure that every plane can be polished from deep scratches till high gloss/zero swirl in one single step. This saves an enormous amount on working hours as polishing takes normally 65% of the total process to make a plane or helicopter a thin film nano layer.

Recommended Polishing Pads

Purple Wool Heavy Cutting Pad cuts like natural sheepskin but finishes like a polish pad. Aggressively removes P1500 grit scratches, leaving a lustrous finish with no hazing by reducing compounding swirls.

The Cutting Pad is constructed with a blue foam and white microfiber. The Micro Cutting Pad with orange foam and white microfiber, the Polishing Pad is constructed with a black foam and black microfiber.

The pad série is available 5.5 inch and 3 inch.
CLEAN

Steril Cleaner
Hard Surfaces

Product ID : CLEAN0500 500 ml / CLEAN5000 5L / CLEAN020L
Consumption : +/- 3.3 ml/m²
Used for : Gelcoat, acrylic, aluminium, stainless
Application field : Aviation

100% Steril with nano interlock technology (active lifting encapsulate
the grease from the surface)

• Surface cleaning and residue removal.
• Cleaning gloves, notebooks, phones or any other item entering
  the cleanroom.
• Wipe down for pass-through to controlled environments.
• Pretreatment for the application of thin film coating

100% Steril
Pure Shine Shampoo
All Exterior Surfaces

Product ID: SHRE1000 1L / SHRE5000 5L / SHRE020L 20L
Consumption: 20 ml : 10 Liter Water
Used for: Cleaning all exterior surfaces
Application field: Aviation

Reactivating Pure Shine Shampoo is an advanced technology, multi-purpose foaming cleaner containing a rinsing aid that will leave hard surfaces nearly dry after rinsing with clean water.

To assure the "easy-to-clean" effect that our nano layers provide, surfaces should be free of dyes, waxes or polymer sealants.

This multi-purpose cleaner contains no polymers or colors and will not leave a film of chemicals behind on the surface.

100% Safe to use for cleaning all non-porous surfaces and meets food grade classification for kitchens.

Contains no colouring chemicals which can discolor surfaces.

Dilution ratio 1: 500  (super economical)
The All-Purpose Cleaner is a fast, all-surface interior cleaner, low foaming, odor free, and especially suitable for removing stubborn stains from carpets, fabrics, vinyl, plastics and leather safely.

- It is very easy to clean dirt.
- Ready-to-use mixture with the right chemical strength and safe to use
- Of course it is safe for the surface of fabrics, carpets, plastics, leather, rubber and does not fade paint.
- Quickly remove dirt, dust and food scraps

Safe to use does not harm the surface
HOW TO USE:
NANO-CERAMIC SIRP-SI03-SI05 MAX Thin film coatings

These products can be stored for up to 24 months (in a dry, temperature-stable, dark environment)

Ambient temperature:
5-30° C - Avoid direct sunlight and/or high air humidity.

CLEANING
Clean the surface thoroughly with our Steril Cleaner until it is absolutely clean. If necessary, use our Scrub Cleaner or Reactivating Pure Shine Shampoo in advance. Make sure that all contamination is removed so that the glass coating can bind properly onto a clean surface. Make sure that the surface is completely dry before application!

APPLICATION OF SIRP
Spray a layer of nano SIRP on the surface and rub it in with a dry microtowel, keep rubbing it into the surface with strong pressure and wipe until all the product is even and scrubbed and only a little hazing / residue is visible gently wipe off this hazing / residue with a clean microfiber cloth after about a minute There is only a little pressure needed to remove the hazing completely. Curing time 1 hour.

APPLICATION OF SI03-SI05-MAX
Our coatings have best results on new on almost like new surfaces, we recommend to polish the surface if needed. Wear nitril gloves to clean the surface with our Steril Pretreatment Cleaner. (without wearing gloves, the oil from your hands may appear via the towel onto the surface) !!
Use more than one clean cloth to remove the dirt from the surface. (Please make sure you don’t brush the dirt around on the surface by using dirty clothes.) Making the clearcoat-chrome-glass-surface clean is the most important issue. If the surface is not super sterl than you will experience chemical reactions between our coatings and the still available contamination what is then visible into the ceramic layer when it is cured. In that case you will need to polish the surface again. So please don’t hurry in carrying out this preparation work, but instead focus on this for 100%.
Learn the right application technique > Watch and Study the Apply Video scanning the QR Code on this page or on the packaging

(fragment BASE COAT )
Use nitril gloves! Remove the plastic inner closure from the bottle and put in the dripper. Shake bottle before use! We recommend to apply the surface in easy to handle segments of about 40x40cm (15”x 15”inch), following the panels shape and corner lines and use these lines for overlaps. Put 8-10 drops BASE COAT on the suede mini towel using the applicator block underneath, devide the coating properly by going 3 times over the same surface, wait till it lights up (+/- 25sec) and remove the residue carefully, and buff it lightly use a separate micro towel for this. Wait 2 hours before you continue with the application of one of our hydrophobic Top Coatings. After 2 hours BASE COAT is 80% cured and ready to receive one of our TOP COATINGS. After about 7 days the BASE COATING has been fully cured and is almost unremovable.
(fragment TOP COAT SI03-SI05-MAX)
Use nitril gloves! Remove the plastic inner closure from the bottle and put in the dripper. Shake the bottle before use! We recommend to apply the surface in easy to handle segments following the panel shape and corner lines and use these lines for overlaps. Put 6-8 drops 40x40cm (15”x 15”inch), (if start use more drops as the towel is otherwise too dry) TOP COATING on the suede mini towel using the applicator block underneath. Start dividing it from out of the middle of the surface and keep spreading it arround by light pressure in criss-cross motions. until the product is evenly distributed. MOST IMPORTANT keep on doing this till no product residue is visible anymore. If you use too much coating and/or spreading it out from example one start position in a corner of a panel then you will not be able to divide it properly towards the other side and it will roll-up on each other and form a not equal layer. To use too much coating and not divide it equally is the second most critical point!! When you apply TOP COATING in this correct way, then there is no need to use a micro towel for polishing anymore.

(fragment SAFETY VISION)
Apply the nano layer SAFETY VISION COATING with the cotton apply pad. Spread 10-15 drops 50x60cm (20”x 25”inch) of SAFETY VISION COATING on the cotton pad and apply rubb it in motions on the windshield with firm pressure until all of the product is evenly distributed and only very little residue is visible. Remove the coating residue with a soft clean microfiber cloth after about a minute and buff the glass/panels gently to take the veils away. There is not much pressure necessary to remove it completely. Note: dry the dripper and close the bottles tightly if you want to save the content for future use. At normal ambient temperature the Nano layers are sufficiently cured after approximately 6 hours (or 2 hours Infrared) (avoid water contact during this time).

MSDS (Safety Data)  SGS (Test Reports)

Application Video  YouTube
How to use our Permant Coating System:

These products can be stored for up to 24 months (in a dry, temperature-stable dark environment)

**Processing Temperature:**
Ambient temperature: 5-30°C
Avoid direct sunlight, rain and/or high humidity.

**IMPORTANT:**
Before you use a NANO-CERAMIC product, please make sure you wear suitable protection gear. We always recommend using a paint suit, respirator mask and latex or nitrile gloves.

**Outfit/Applicators:**

- Fresh Air Respirator
- Paint Suit
- Nitrile gloves
- Professional Paint Sprayer 1.3-1.7mm / 0.05-0.06” nozzle
- Paint Roller (Microfiber)
- Respirator
- Paint Brush (acrylic)

**Application information**
The SI11/SI12 coatings can be applied directly or indirectly on all surfaces (porous and non-porous) such as concrete, steel, wood, acrylic, gypsum, painted or unpainted surfaces, indoors, or outdoors. The surface underneath will be superbly protected against erosion and corrosion and will stay cleaner longer. Cleaning becomes quicker, easier, and less expensive, as special cleaning agents are unnecessary.

**Preparation**
Make sure the surface is free from any contamination and dirt. A zinc rich primer can be used in case of corrosive circumstances. **Warning: the surface must be completely dry before application and must stay dry for 6 hours after application!**

**The 2-Component Permanent Coating System**
Mix the can SI11B-SI12B with the can of SI11A-SI12A by pouring can B into can A, or measure exactly by net weight in a ratio of 7:3 and mix very well.

Carefully pour the mixed contents into a professional paint sprayer, and spray in thin layers until the surface reaches a thickness between 50-150 μm / 0.05-0.15mm after drying.

Depending on the surface, material and structure, different application techniques can be used (such as paint rollers or brushes). Let the surface dry for 24 hours. It is touch-dry in 1 hour, after 4 hours, 85% cured, and the remaining 15% (transformation into ceramics) is fully cured after 7 days.

Be aware that the mixed contents cannot be stored longer than 3 hours. The surface can simply be maintained with a high pressure washer at 80 bar using our biologically degradable Reactivating Shampoo.

**Tool cleaning**
The individual components, as well as the mixing system of the paint sprayer, can be diluted and cleaned using our Steril Cleaner.
Maintenance Plan

Step 1
Washing

Step 2
Polishing

Step 3
Steril Cleaner

Step 4
Basecoat / SI11 or SI12
Curing time: 2 hours

Step 5
Nano Layer
Hydrophobic Topcoat

Step 6
Curing time: 6 hours in ambient temperature

MSDS (Safety Data)  TEST (EN 1504-2)
Did you know?
That our coatings are made of pure silica sand, which is the most common element on Earth?