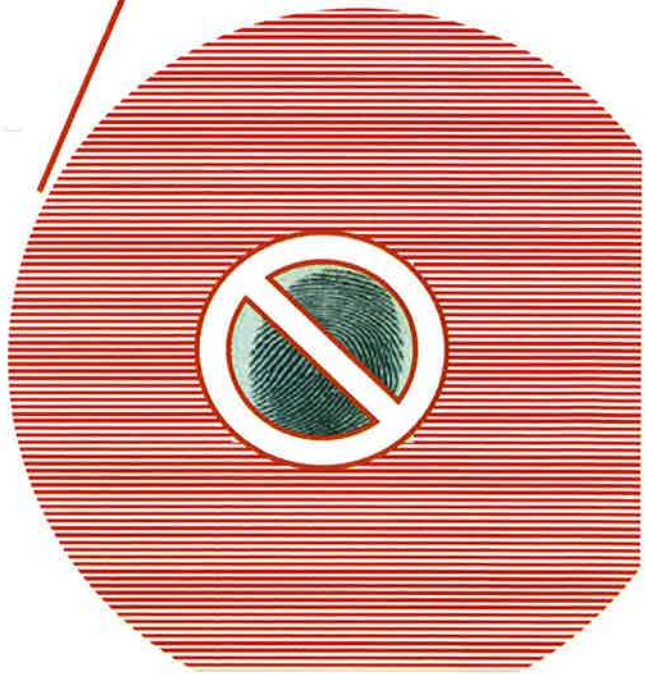




NSP (Non Stain Protection)
Easy Clean Process



NSP (Non Stain Protection) – Easy Clean process

Fingerprints can be a major problem on some stainless steel applications with public direct access?. They are so difficult to clean it; they require the use of special cleaning agents to remove them. This problem can cause significant and annoying maintenance costs and damage image of building (shop, offices, mall, hotel...) if surface has not been cleaned recently

Nanocomposite coatings for invisible protection against fingerprints and dirt designed for visible surfaces made from stainless steel.

Description:

With NSP Nano technological Anti fingerprints process Polaris uses the most advanced Nanotechnology to coat stainless steel with a metallic anti-abrasive layer of transparent coating. Its strong adherence provides stainless steel surfaces with a firm and lasting protection.

NSP processed metal surfaces have some excellent characteristics: they achieve waterproof, oil proof, dust resistant properties. They are easy-to-clean surfaces just by using a soft fabric or a soft paper with any regular soap or glass cleaner.

NSP Nano technological processed stainless steel surfaces offer higher wear resistance than not processed ones.

Advantages:

- Long-term UV stability of product
- Protects metal from weather corrosion and rust
- Low coating thickness with high mechanical resistance
- Smooth surfaces become water-repellent, soiling will leave no residue on metal surface
- Graffiti can be removed easily using Polaris Remover products
- Avoids deposition of rusty crusts
- Optionally with easy to clean

Features:



1) NSP Nano technological Anti fingerprints process is available on following surface finishings:

- Hairline, Nr. 4 (Scotch Brite), Vibration, Bead Blasted, Etched Designs....
- On colored and on non-colored stainless steel surfaces



2) Delivery:

- Each sheet with protective Covering plastic film (black and white).

Materials Range:

Range of NSP Production Steel Grades

AISI-304, AISI-316, AISI-430 and any other stainless steel grade

Surface Finishings

Hairline, Nr. 4, Vibration, Bead Blasted, , 2B, on colored or on noncolored

Stainless Steel sheets. **NOT available on mirror finished surfaces.**

Min. Thickness(mm.) min. 0.5 mm.

Width(mm) max. 1219 mm. **Max. Length(mm)** max. 4000 mm.

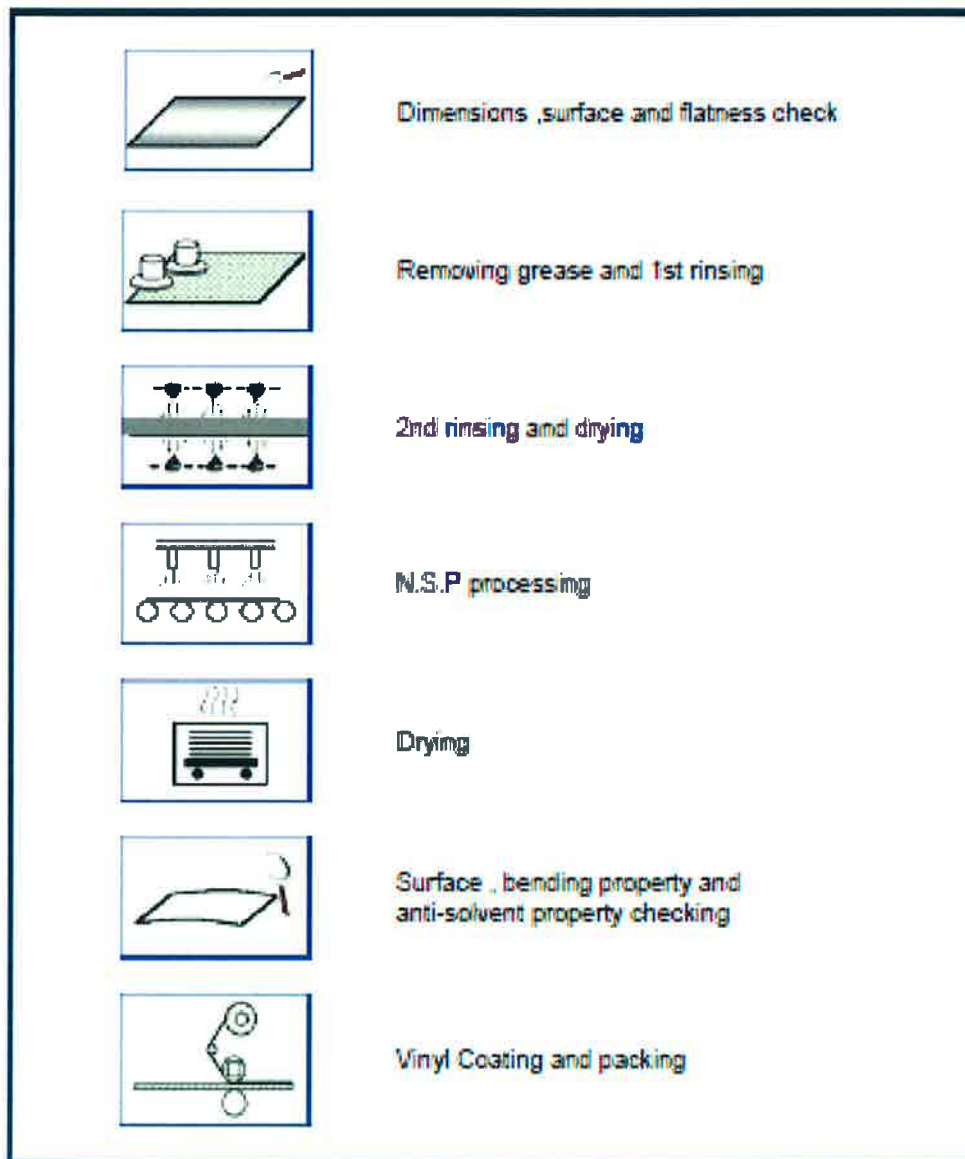
NSP (Non Stain Protection)- Properties and Superiority

Properties					
Maintenance	It prevents contamination and permanently maintains the unique beauty and purity of stainless steel.				
Self-Cleaning Effect	Application of our unique super-hydrophilic coating provides stainless steel surfaces with natural self-cleaning effect.				
Economical	Maintaining clean surfaces just through simple easy cleaning greatly reduces building maintenance costs (easy-to-clean).				
Coating hardness	Compared with current coating products, NSP processed materials possess outstanding surface hardness. NSP processed surfaces are not easily damaged.				
	<table border="1"> <tr> <td>Ordinary organic coating (urethane/acrylic) Pencil Hardness</td> <td>Mit Pencil Hardness H-2H</td> </tr> <tr> <td>N.S.P(Non Stain Processing)</td> <td>Mit pencil Hardness 5H</td> </tr> </table>	Ordinary organic coating (urethane/acrylic) Pencil Hardness	Mit Pencil Hardness H-2H	N.S.P(Non Stain Processing)	Mit pencil Hardness 5H
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N.S.P(Non Stain Processing)	Mit pencil Hardness 5H				
Adherence	Results of conducting detachment test after Cross Cutting(1mm x 10EA x 10EA) Test. No detachment.				
Processability	Because of the excellent processability of NSP protected surfaces, even after subjecting a coated plate to a variety of processing methods such as Cutting, Folding, N.C.T, Stamping, they show no cracking, maintaining the excellent physical properties of the NSP treated surfaces.				
Fire Resistance	Our super-thin nanocoatings produce no emission of toxic fumes in event of fire.				
Solvent Resistance	Strong protection properties against acetone thinners through the use of our NSP coating.				
Price	Exceptionally lower cost compared with existing organic and fluoride resin coatings.				

NSP (Non Stain Protection) - Coating Performances

Test	Test conditions	Test Results
Uniformity of color and luster	Visual Control	uniform
Coating thickness	Elcometer	2 ~ 8µm
Coating hardness	Mit. Pencil Hardness	5H
Mechanical Properties	Cross Cutting Space interval 1mm*10EA * 10EA	100 / 100 No abnormality
Shock resistance	DuPont Impact deformity Tester (6.35mm x 500g 500mm)	No abnormality
Salt water resistance	3% NaCl (Dipping after 96 hours detachment and expansion)	No abnormality
Alkaline Resistance	5% Na2CO3 (Dipping / after 24 hours)	No abnormality
Chemical Resistance	Acid Resistance 5% H2SO4 (Dipping /after 24 hours)	No abnormality
Contamination Resistance	Black oil-based permanent marker (Removal by alcohol after 24 hrs)	No abnormality
Solvent Resistance	Acetone Rubbing (50 times)	No abnormality
Resistance to Extreme Temperatures	150°C ↔ 20°C (repeated 5 times)	No abnormality
Processability	90° Bending Test	Bendable Laser Processable N.C.T. Processable

Manufacturing process of NSP (Non Stain Protection Processing)



Some questions to be considered:

- ⬇ Avoid the use of metal brushes; they would damage the stainless steel surface.
- ⬇ Avoid the use of chemicals like hydrochloric acid /sulphuric [sulfuric] acid/nitric acid / sodium hydroxide.
- ⬇ Just use a soft cloth to clean the oil stains, dirty, dust and fingerprints when they appear.

Some other attentions:

1. Strip the sheet of the PVC Covering **only** after final application; afterwards clean the stainless steel sheet surface.
2. Recover with proper PVC protective film if original PVC film has been stripped before laser cutting processes.
3. Promptly clear foreign contaminating materials like bonding (adhesive) agents, paints, cement, silicon...
4. NSP Anti fingerprints processed materials are suitable for any indoor application.

Not suitable for outdoor applications with direct exposure to solar UV radiation.

Please do not hesitate to contact our Sales Department for any question that you still can have about our NSP coated materials that maybe has not been detailed in these pages.