



WHAT IS NSP? (ANTIFINGERPRINTS NANOCOATING by The Inox in Color®)

□ NSP (Non Stain Processing) – No fingerprint mark 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

Description:

With NSP Nanotechnological Antifingerprints process **The Inox in Color®** applies most advanced Nanotechnology. Metal surfacers are coated a metallic anti-abrasive layer of transparent nanometer. 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 Nanotechnological processed stainless steel surfaces offer higher wear resistance than not processed ones.

Features:

1) NSP Nanotechnological Antifingerprints 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
- NOT available on mirror finished surfaces
- Only available for indoor applications. Not to be used in outdoor applications.

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 non-colored Stainless Steel sheets. NOT available on mirror finished surfaces.
Shapes	Sheets, Bars, ...Other parts if shape not too complicated.
Min. Thickness(mm.)	min. 0.5 mm.
Width(mm)	max. 1219 mm.
Max. Length(mm)	max. 4000 mm.



NSP (Non Stain Processing) by The Inox in Color® – 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.	
	Ordinary organic coating (urethane/acrylic) Pencil Hardness	Mit Pencil Hardness H~2H
	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 Processing) by The Inox in Color® – Coating Performances

Test		Test conditions	Test Results
Uniformity of color and luster		Visual Control	uniform
Mechanical Properties	Coating thickness	Elcometer	2 ~ 6µm
	Coating hardness	Mit. Pencil Hardness	5H
	Adhesiveness	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
Chemical Resistance	Alkaline Resistance	5% Na2CO3 (Dipping / after 24 hours)	No abnormality
	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

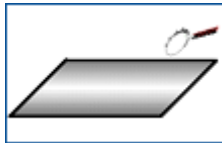


the inox in color

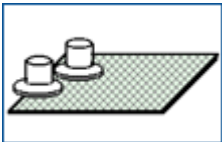
ARCHITECTURAL & DECORATIVE
STAINLESS STEEL



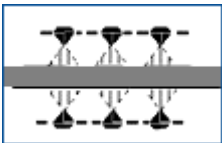
Manufacturing process of NSP (Non Stain Processing)



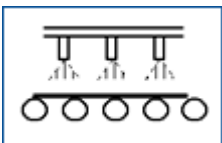
Dimensions ,surface and flatness check



Removing grease and 1st rinsing



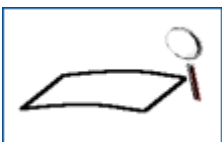
2nd rinsing and drying



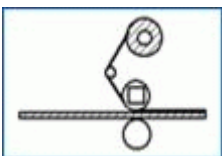
N.S.P processing



Drying



Surface , bending property and
anti-solvent property checking



Vinyl Coating and packing

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STAINLESS STEEL



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 clear 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 Antifingerprints 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.

The Inox in Color ®
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