

PVD COATED STAINLESS

ANTI-FINGERPRINT COATING (AFP)

Non-Stain Processing (N.S.P.) anti-fingerprint coating on vibration, hairline, bead blast, and various embossed finishes.

Anti-fingerprint coating is transparent and provides lasting protection for stainless steel. This excellent coating protects Stainless Steel from water, oil, dust, and fingerprints, and makes the stainless steel easy to clean.

Anti-Fingerprint Coating Principles & Data

Anti-fingerprint stainless steel refers to the stainless steel coated with a transparent colourless or light-yellow nano-metal polymer composite coating, which firmly together with stainless steel surface after drying to form a transparent solid protective film coating. Fingerprint-resistant process increases the appearance of metal plate and prevent people from touching the surface of these plates to leave fingerprints, oil, sweat, dust and so on to make it lose luster. AFP (Anti-Fingerprint) has become one of our most inquired and demanded coatings on various Stainless-Steel finishes because it enhances the surface hardness.

Anti-fingerprint treatment is not that the fingerprint will not be printed on the surface of the stainless steel, but the fingerprint trace is lighter than ordinary stainless steel and relatively easy to handle and will not remain stains. Generally, it is obtained after grinding, drawing, polishing, mirror, titanium/copper plating and other processing for the stainless-steel plate and coil.

The effect of anti-fingerprint depends on the thickness of the coating. The thicker the coating, the better the anti-fingerprint effect of stainless steel. But too thick coating will be formed orange dermatoid grain in the stainless-steel surface which affect the appearance. Generally, the greater the surface tension, the easier it is to adhere to other objects, anti-fingerprint treatment is to reduce the tension of the metal surface through the coating. The composite coating is 1-10 microns thick and contains silicon dioxide, which can change the original reflectivity and high scattering characteristics of stainless steel.

Anti-Fingerprint Nano Surface Coating (AFP) Properties & Benefits:

Through the manufacturing treatment, the Nano compound becomes attached to the metallic surface, resulting in the forming of a thin but durable protective coating. This coating creates a barrier to prevent the intrusion of oxygen and moisture enhancing the materials anti-corrosion and anti-fingerprint abilities. With the application of Nano anti-fingerprint coating (AFP), the surface hardness of stainless steel is increased.

- Ease of maintenance: Solves the problems of fingerprints on Stainless Steel; ease of maintenance can be accomplished with use of a clean cotton towel or cloth, and light detergent, such as Windex.
- Increase surface hardness: Regular Stainless steel is rated 2-H to 3-H pencil hardness test. After the AFP treatment, the surface hardness is tripled to reach at least 6 H hardness, which decreases the chances of receiving surface scratches.
- Anti-corrosion rating: Tested and proven by SGS (Salt Spray Test), up to 500 hours.
- Anti-Chemical substances: There has been a noticeable improvement on decreasing the risk of corrosive chemical substances damaging the stainless steel.

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- Laser and high temperature cutting: Regular transparent coating on stainless steel cannot resist laser cutting and often leaves obvious burn marks on the surface; however, after the application of Nano AFP treatment, laser burn marks are reduced.
- Adhesion Test: passed 100% Cross-Cut Test after AFP treatment. The material can be bent or folded, and still retains the same physical properties of regular Stainless Steel.
- AFP coating is in micro units. Normal application is usually between .0002 and .0003 inches.

Step by Step Process:

- 1) Dimensions, surface and flatness check
- 2) Removal of grease and first rinse
- 3) Second rinse
- 4) N.S.P (Non-Stain Processing)
- 5) Drying
- 6) Surface Inspection, formability, & anti-solvent property check

Test Report

N.S.P. (Non-Stain Processing)

Adhesiveness: Passed 100%

Resistant to Solvents: Passed 100%

Bending Ability: Passed 100%

TEST	STANDARDS	RESULT
Pencil Gouge/Scratch Hardness	ASTM D3363-00 / JIS 5600	2H~6H
Salt Solution Spray Test	ASTM B117-09 / JIS Z 2317	>500hrs
RoHS	IEC62321:2008	Pass
Bending (180°)	JIS K 6744 / ATSM D145	Pass
Impact	ASTM D4145	Pass
Adhesion	JIS K 5400 / ASTM D3359	100/100

Use & Maintenance Guidelines

- Using soft cotton cloth directly or with tape water to clean the surface, then dry the surface
- Do not use acidic solvent, alkaline solvent or even thinner to clean the surface
- Do not use sandpaper (or similar) to clean the surface
- Do not let the PVC protective layer stay on the stainless-steel surface for more than 90days from the date delivery to avoid leaving the remains of the adhesive glue on the stainless-steel surface

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