



Nano Ceramic Coating

Product Description

It is an environmental friendly, non-toxicology, excellent hard and heat stability ceramic coating. It is consist of the nano-scale (10~30 nm)silicate, inorganic pigments and heat resistant fillers. Owing to the nano-scale effect, the ceramic coating can just be cured at low temperature about 180~200°C. It can be taken as very thin glass or enamel. The nano-structured surfaces contribute to the nonstick or stainless character, which was the well-known Lotus Effect.

Application field:

B.B.Q.Grill (gas or electric)

Cookware

Bakeware

Heater

Frypan

Iron

Product Advantages

-Excellent Heat Resistance

-Nonstick and easy to clean

-Super Weather Resistance

-Low Baking Schedule

-Excellent Hardness

-Excellent Chemical Resistance

Physical Properties:

Composition	Silica, inorganic pigment and filler, cross-linker, solvent
Color	Available in a wide range and ceramic-like texture
Gloss	Available in 60 °Gloss (ASTM D-523) from 20 to 60 units.
Shelf life	30~45 days in unopened container at 4~8 °C
Pack size	1 gallon to 5 gallon

For finish gloss higher than 70 units, it would need a clear coat on the color coat.

Dry Film Thickness

Single-coat:

15-25 microns

Two-coat:

Primer/color coat:15~20 microns

Top coat/clear coat: 5-10 microns

Application Method:

Substrate: Metal such as aluminum, stain steel and iron

Pretreatment and processes: Sandblast →degrease/Cleaning→spraying→curing

Spraying: Nozzle size: 1.1~1.3 mm Air pressure: 2.5~3.5 kg/m²



Bake Schedule (Peak Metal Temperature)

Preheating : 60~80°C	Curing: 180~200°C
5~10 minutes	10~15 minutes

Physical Properties

Item	Test Method	Performance
Hardness	Mitsubishi Uni Pencil	7~8H
Adhesion	Cross hatch	No removal
Solvent resistance	200 time with Acetone	No visual change
Acid resistance	5% H ₂ SO ₄ x 48 hours	No blister, no visual change
Acid pollutants resistance	A magic marker, vapor 24 hours remove with alcohol	No visual change
Abrasion resistance	BS 7069 (1.5 kg with cleaning cloth)	>500 cycles
Alkali resistance	5% Na ₂ CO ₃ x 48 hrs	No blister, no visual change
Salt spray resistance	5% NaCl x 3000 hours	1/20", no blister
Heat resistance	500°C x 1 hour	No crack, no visual change
Boiling water resistance	98±2°C water x 2hrs	No visual change, no crack, no blister
Weather resistance	Weather-O-meter x 5000 hours	Color retention 2 dE Max. Gloss retention 90% Max.

Green Product: Environmental-friendly and save energy

There are no any toxic and greenhouse gases off when in coating process, cooking application and the waste disposal. The Teflon nonstick coating (perfluorocarbon, PFCs) will contaminate the environment and human blood.

Meets and exceeds the US FDA and LFGB requirement

Owing to its inorganic ceramic nature, it won't have any toxic gases off when be heated or burned.

P.S. The test method of FDA requirement is set at room temperature not as high as it would be heated or burned. In other words, That test procedure is not appropriate for the cookware and the bakeware application.

廣州利晟貿易有限公司

Guangzhou Nuway Trading Co., Ltd.

廣州市黃埔區黃埔東路 5 號 2718 房 郵編:510725

Rm.2718 No.5 Huangpu East Rd., Huangpu District, Guangzhou City, 510725 China

Tel:+86(20)2862 7475

Fax:+86(20)2862 7479

Website:www.nuwaycoatings.com



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