



## **Ceramic Coatings**

## C-109 Water based black two layer ceramic non-stick coating

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DESCRIPTION	C-109 is two layer black ceramic coating, smooth hand feeling, excellent surface performance and chemical resistance. Superior initial non-stick property, easy to clean. It's ideal for internal coating and external coating of frying pan, stock pot, baking tray, electric fry pan and inner pot of electric cooker etc.	
ТҮРЕ	Ceramic nano material	
KEY FEATURES	<ul> <li>PFOA free and excellent heat resistant</li> <li>Excellent and lasting non-stick performance, easy to clean</li> <li>Excellent chemical resistance, corrosion resistance and abrasive resistance</li> </ul>	
TYPICAL PROPERTIES	Appearance	Black liquid (Primer and top)
	Solid content (%)	35±1
	Viscosity (cp)	600~900 Primer 400~700 Top
	Density (g/ml)	1.20 Primer/1.30 Top
	рН	8-11(Primer and top)
	Color of the film surface	Black (Flat and smooth)
	Curing temperature (°C)	280-300
	Gloss (60 °glossimeter)	10-20
	Film thickness (µm)	34-50
	Non-stick performance Fry eggs at 170±10°C	>8 cycles
	Corrosion resistance Boling 10% salt water for 24 hours	No blister
	Abrasion resistance 3KG/21cm <sup>2</sup>	>4000 cycles
	Hardness (ZHONGHUA pencil)	>6H
APPLICATION	• Internal coating and external coating of frying pan, stock pot, baking tray, fry pan and inner pot of electric cooker etc.	
STORAGE	• Available in 20 kg/ barrel or 30 kg/ barrel	
AND	<ul> <li>Store products in tightly closed original containers at 5-35 °C</li> <li>Shelf life: 6-9 months from delivery date</li> </ul>	
HANDLING	• According to non-dangerous goods transport	
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## 1. Requirement on pre-treatment

- Firstly, apply high-temperature degreasing, then wash with 1%~3% NaOH solution (60°C) for more than 6 minutes, dry it after water rinsing;
- Blast with 80#~120# corundum to make the surface roughness reach 2.0µ~3.0µ, pay attention to sandblast evenly;
- Wash with 1%~3% NaOH solution(60°C) for more than 6 minutes, rinse with water;
- Wash with 1%~3% hydrochloric acid solution (60°C) for more than 6 minutes, rinse with water and dry.
- 2. Preparation of the coating
- Dispersion of coating: the coating must be fully dispersed before operation;
- Viscosity adjustment: the viscosity could be adjusted according to different spray methods. Dilute with clean water if the viscosity is over high;
- Coating filtration: filtrate the coating with screen (100mesh) before using.

## 3. Application

- **HOW TO USE** The spraying environment should be dry, well-ventilated, no smoking and fire. We suggest using dedicated spray gun, elevated tank and curing oven;
  - The air compressor should be degreased, dewatered and equipped with water oil separator before using;
  - Roll the coating at 30rpm speed before using to make sure there is no sediment, and filter with 100 mesh screen;
  - Adjust atomization and oil pump capacity of the spraying gun; make sure the unit is clean and flat;
  - Preheat the substrate to 35°C and spray the primer. Dry it at temperature of 120°C~150°C for 10min-15min. Keep the thickness of primer within 15µm-22µm;
  - Spray top coating after the primer is dry and cooling to room temperature, then spray the top. Dry the unit at the temperature of 100 °C ~150 °C for 10min, and gradually increase the temperature to 280 °C ~300 °C. Keep for 10 min. Keep the thickness of top coat within 12µm~20µm. The thickness of two coat tally should be between 30µm~40µm;
  - The oven (or the tunnel drier) must be well ventilated; otherwise, it will lead to color change of coating.