



# **Non-stick Coatings**

# PF-612 Water based Three-layer Marble-Coating (Starry Sky)

DESCRIPTION	PF-612 is Water based Two-layer Marble-Coating (Starry Sky). It is widely applied to internal coating of non-stick kitchenware such as aluminum-made frying pans, woks, stockpots, electric stewpots, electric bake wares and cake molds.	
TYPE	Water based marble-coating	
KEY FEATURES	<ul> <li>Eco-friendly and PFOA free</li> <li>Showing the effect of natural marble</li> <li>Excellent chemical resistance and abrasive resistance</li> <li>Excellent and lasting non-stick performance, easy to clean</li> </ul>	
TYPICAL PROPERTIES	Product model	PF-612P (Primer) PF-612T (Top) PF-612D1 (Dot 1) PF-612D2 (Dot 2)
	Recommended dosage	10kg Primer: 10kg Top 0.5kg Dot 1: 0.5kg Dot 2
	Appearance	Black (Primer) Black (Top) White (Dot 1) Light yellow (Dot 2)
	Solid content (%)	35±1 (Primer) 45±1 (Top) 40±1 (Dot 1) 39±1 (Dot 2)
	Viscosity (cp)	600~1000 (Primer) 300~800 (Top) 300~800 (Dot 1) 300~800 (Dot 2)
	Density (g/ml)	1.20±0.20 (Primer) 1.30±0.20 (Top) 1.25±0.20 (Dot 1) 1.25±0.20 (Dot 2)
	рН	8~11 (Primer) 8~11 (Top) 8~11 (Dot 1) 8~11
	Gloss (60 °glossimeter) Film thickness (μm)	10-20 35-45

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#### The Chemical Company

Non-stick performance Fry eggs at 160±10℃	>10 cycles
Corrosion resistance Boling 10% salt water (24 hours)	No blister
<b>Abrasion resistance 3KG/21cm<sup>2</sup></b>	>5000 cycles
Hardness (ZHONGHUA pencil)	2H
Adhesion (1mm*1mm)	Grade 1

# Appearance of coating



### **APPLICATION**

Inside of tensile aluminum and die-casting fry pan, wok, soup pot, etc.

### **STORAGE**

## • Available in 20 kg/ barrel or 30 kg/ barrel

# AND

• Store products in tightly closed original containers at 5-35°C

• Shelf life: 6-9 months from delivery date

#### HANDLING

According to non-dangerous goods transport

### 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.

### **HOW TO USE**

• 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. Rolling the coating at the speed of 30rpm with rolling machine for 30mins, shouldn't exceed 60 mins.
- 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)

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before using.

# 3. Application

- 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.
- Adjust atomization and oil pump capacity of the spraying gun; make sure the unit is clean and flat.
- Preheat the substrate to  $35^{\circ}$ C and spray the primer. Dry it at temperature of  $120^{\circ}$ C ~ $180^{\circ}$ C for 10min-15min. Keep the thickness of primer within  $15\mu$ m- $20\mu$ m.
- Spray top coating after the primer is dry and cooling to room temperature, then spray the dot. Dry the unit at the temperature of  $150 \,^{\circ}\text{C} \,^{\sim}200 \,^{\circ}\text{C}$  for  $10\text{min}\sim20\text{min}$ , and gradually increase the temperature to  $400 \,^{\circ}\text{C} \,^{\sim}410 \,^{\circ}\text{C}$  (the temperature of substrates), keep for  $10 \,^{\circ}\text{min}\sim15 \,^{\circ}\text{min}$ . Keep the thickness of top coat within  $8\mu\text{m}\sim12\mu\text{m}$ . The total thickness of final coating film should be between  $35\mu\text{m}\sim45\mu\text{m}$ .
- In spraying process, keep stirring inside of the elevated tank, the size of spraying nozzle should be between 1.3mm ~ 1.5mm, the pressure is about 2.5-4 bar.
- The oven (or the tunnel drier) must be well ventilated; otherwise, it will lead to color changing of coating.

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