



# **Ceramic Coatings**

# C-105 Single layer black ceramic non-stick coating

| DES | CRI | PT | ION |
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C-105 is single layer ceramic coating, smooth hand feeling, excellent heat resistance, excellent non-stick performance and abrasion resistant It can be used on non-stick cookware and household appliance.

| abrasion resistant It can be used on household appliance.  | non-stick cookware and   |  |
|--|--|--|
| Ceramic nano material  |  |  |
| <ul> <li>PFOA free</li> <li>Excellent heat resistant (&gt;400°C)</li> <li>Excellent non-stick performance and easy to clean</li> <li>Superior chemical resistance and abrasive resistance</li> </ul> |  |  |
| Appearance   | Black  |  |
| Solid content (%)  | 52±1   |  |
| Viscosity (cp)   | 600~1000   |  |
| Density (g/ml)   | 1.20   |  |
| Color of the film surface  | Black  |  |
| <b>Curing temperature (℃)</b>  | 280-300  |  |
| Gloss (60° glossimeter)  | >35  |  |
| Film thickness (μm)  | 30-45  |  |
| Non-stick performance<br>Fry eggs at 170±10℃   | >10 cycles   |  |
| Corrosion resistance Boling 10% salt water for 24 hours  | No blister   |  |
| Abrasion resistance 3KG/21cm <sup>2</sup>  | >8000 cycles   |  |
| Hardness (ZHONGHUA pencil)   | >6H  |  |
|  | PFOA free  Excellent heat resistant (>400°C)  Excellent non-stick performance and all superior chemical resistance and all Appearance  Solid content (%)  Viscosity (cp)  Density (g/ml)  Color of the film surface  Curing temperature (°C)  Gloss (60° glossimeter)  Film thickness (μm)  Non-stick performance  Fry eggs at 170±10°C  Corrosion resistance  Boling 10% salt water for 24 hours  Abrasion resistance 3KG/21cm² |  |

#### **APPLICATION**

Aluminum and stainless steel fry pan, wok, soup pot, rice cooker, electric pressure cooker, electric saucepan, electric baking tray, cake mould etc.

# STORAGE AND HANDLING

- Available in 20 kg/ barrel or 30 kg/ barrel
- Store products in tightly closed original containers at 5-35°C
- Shelf life: 6-9 months from delivery date
- According to non-dangerous goods transport

Anhui Sinograce Chemical Co., Ltd. Add.: Hefei city, Anhui province, China

Tel: +86-0551-63459511 Mob: +86 17756043696 Email: <a href="mailto:sales@sinogracechem.com">sales@sinogracechem.com</a> Web: <a href="mailto:www.chinasinograce">www.chinasinograce</a>





#### 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. Mix coating

- Before mixing (maturing), the best condition of coating is at the temperature of 20°C (refer to the storage in the following);
- Before using, fully stir or roll component A at the speed of 120rpm~200rpm for more than 30min until there is no precipitation;
- Add component B to A, roll with hands for 5~10 seconds till feel the bottle is warm, than roll the coating with rolling machine at the speed of 90~120 rpm. 20 °C is the best mixing temperature. Mix rolling for 4~8 hours. Add component C and roll evenly before using;

#### **HOW TO USE**

- Deflate the air to avoid pressure since there is heat generated during the mixing process. Watch out the gas or liquid may get sprayed when open it;
- Use the coating within its warranty (refer to the storage of coating). To prevent the coating from expiring, we recommend using it within 24 hours and calculating the needed amount before mixing the components. So it is better to calculate the needed quantity according to the production plan before maturing.

## 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;
- Roll the coating at 90rpm speed before using to make sure there is no sediment, and filter with 300 mesh screen;
- Adjust atomization and oil pump capacity of the spraying gun; make sure the unit is clean and flat;
- Preheat the substrate at  $50^{\circ}\text{C} \sim 80^{\circ}\text{C}$  before spraying coating (Adjust the preheating temperature according to actual situation). Then cure the complete coating, please increase

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the temperature to 280 °C gradually, and keep 280~300 °C for 10min. Keep the dry film thickness at the range of  $38\pm5\mu m$ ;

• In spraying process, keep stirring inside of the elevated tank, the size of spraying nozzle should be between 1.0~1.3mm, the pressure is about 3.5bar.

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