**PRODUCT DATA SHEET PROGUARD CN 200 A.S.**

**Proguard CN 200 a.s.** is an anti-statically conductive two pack special composite coating containing micro-ceramic particles and nano-particle reinforcement, based on an ultra-modern Novolac-resin base; providing chemical resistance, corrosion and abrasion protection to a wide variety of substrates in extremely aggressive environments at elevated temperatures.

**APPLICATION RANGE**

- Internal coating for
  - Different substrates (e.g. metals, plastics, GFK, CFK and concrete, etc.)
  - Storage tanks for crude oil, hydrocarbons, chemicals
  - Special tanks for urea, bio oils
  - Process and pressure vessels
  - Pipelines for oil and gas

**APPLICATION DATA**

- **Application methods**: Airless spray pump (without filter), Ratio 1:68 or greater. Tip size: 0.019-0.029"; Hose length max. 50 m, Spray hose diameter max. ¾"; Material must be taken up directly (without intake hose) from bucket; avoid waiting time under pressure (reduction of pot life!)
- **Mixing ratio by weight**: 9 : 1 -> 9 Parts A (Base) to be mixed up mechanically and to be mixed thoroughly with 1 part B (hardener)
- **Mixing time**: Component A: Stir up intensively by mechanical means Components A+B: Mix up homogeneous. Mixer speed >100 rpm
- **Potlife**: 30 minutes at 20 °C / 25 minutes at 25 °C / 20 minutes at 30 °C / 10 minutes at 40 °C material temperature - waiting time under continuous pressure may reduce pot life!
- **Material spray temp**: Minimum 20 °C recommended
- **Thinner**: Thinners should not be added. Proguard cleaners should be used to clean and flush equipment
- **Filters**: Remove filters – product should be sprayed without filters in pump and gun.
- **Number of coats**: 1 or 2 coats - depending on environment. Minimum coating thickness 300 μm. Maximum thickness per layer: 500 μm
- **Consumption**: Film thickness per coat: dry 300 μm 300 μm 0.43 2.33
  - 500 μm 500 μm 0.72 1.39

**TECHNICAL INFORMATION**

<table>
<thead>
<tr>
<th>Color</th>
<th>Light Gray, Dark Gray</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloss</td>
<td>Satin</td>
</tr>
<tr>
<td>Volume Solids</td>
<td>Approx. 100 %</td>
</tr>
<tr>
<td>VOC</td>
<td>Approx. 0 mg</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Good</td>
</tr>
<tr>
<td>Chemical resistance</td>
<td>Excellent</td>
</tr>
<tr>
<td>Abrasion resistance</td>
<td>Good</td>
</tr>
<tr>
<td>Adhesion</td>
<td>Excellent; &gt; 20 MPa</td>
</tr>
<tr>
<td>Leak resistor</td>
<td>10^4 – 10^6 Ω</td>
</tr>
<tr>
<td>Specific Gravity (Mix)</td>
<td>Approx. 1.43</td>
</tr>
</tbody>
</table>

**FEATURES AND BENEFITS**

- High antistatic properties
- High temperature resistance
- Excellent chemical resistance

**APPLICATION RANGE**

Internal coating for
- Different substrates (e.g. metals, plastics, GFK, CFK and concrete, etc.)
- Storage tanks for crude oil, hydrocarbons, chemicals
- Special tanks for urea, bio oils
- Process and pressure vessels
- Pipelines for oil and gas

**APPLICATION DATA**

- **Application methods**: Airless spray pump (without filter), Ratio 1:68 or greater. Tip size: 0.019-0.029"; Hose length max. 50 m, Spray hose diameter max. ¾"; Material must be taken up directly (without intake hose) from bucket; avoid waiting time under pressure (reduction of pot life!)
- **Mixing ratio by weight**: 9 : 1 -> 9 Parts A (Base) to be mixed up mechanically and to be mixed thoroughly with 1 part B (hardener)
- **Mixing time**: Component A: Stir up intensively by mechanical means Components A+B: Mix up homogeneous. Mixer speed >100 rpm
- **Potlife**: 30 minutes at 20 °C / 25 minutes at 25 °C / 20 minutes at 30 °C / 10 minutes at 40 °C material temperature - waiting time under continuous pressure may reduce pot life!
- **Material spray temp**: Minimum 20 °C recommended
- **Thinner**: Thinners should not be added. Proguard cleaners should be used to clean and flush equipment
- **Filters**: Remove filters – product should be sprayed without filters in pump and gun.
- **Number of coats**: 1 or 2 coats - depending on environment. Minimum coating thickness 300 μm. Maximum thickness per layer: 500 μm
- **Consumption**: Film thickness per coat: dry 300 μm 300 μm 0.43 2.33
  - 500 μm 500 μm 0.72 1.39

All above values are approximate and may be used as a guideline for specifications.
SURFACE PREPARATION
All surfaces to be coated should be clean, dry and free from contamination. Prior to application, all surfaces should be assessed and treated in accordance with ISO 8504:2000. Remove weld spatter and smooth weld seams and sharp edges. Oil or grease should be removed according to SSPC-SP1 solvent cleaning.

Abrasive Blast Cleaning
For best adhesion results the surfaces should be prepared by abrasive blast cleaning to minimum SA 2.5 (ISO 8501-1:2007) or SSPC-SP10. A sharp, angular surface profile of R,75-100 μm is required. Contact Ceramic Polymer GmbH for further information. The coating system must be applied before oxidation of the steel occurs. If oxidation does occur the entire oxidized area should be reblasted to the standard specified above. Surface defects revealed by the blast cleaning process should be ground, filled or treated in the appropriate manner.

Concrete Substrates
Refer to Ceramic Polymer GmbH for specific recommendations.

CONDITION DURING APPLICATION
Substrate temperature should be minimum 10 °C and minimum 3 °C above dew point. Relative humidity should be below 85 %. Temperature and relative humidity must be measured in the vicinity of the substrate.

DRIYING TIME

<table>
<thead>
<tr>
<th>Substrate temperature</th>
<th>Fully cured</th>
<th>Chemically resistant</th>
<th>Recoat (wet-in-wet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
<td></td>
</tr>
<tr>
<td>20 °C</td>
<td>48 hrs.</td>
<td>7 days</td>
<td>10 hrs.</td>
</tr>
<tr>
<td>25 °C</td>
<td>36 hrs.</td>
<td>4 days</td>
<td>9 hrs.</td>
</tr>
<tr>
<td>30 °C</td>
<td>24 hrs.</td>
<td>3 days</td>
<td>7 hrs.</td>
</tr>
<tr>
<td>40 °C</td>
<td>12 hrs.</td>
<td>2 days</td>
<td>5 hrs.</td>
</tr>
</tbody>
</table>

STORAGE AND PACKING
Preferred storage conditions are to keep the containers in a dry and cool area below 35 °C provided with adequate ventilation. The containers should be sealed tightly.

Packing
15.0 kg kits incl. hardener

Shelf life
2 years

QUALITY ASSURANCE AND INSPECTION
To ensure a continuous quality of the product, the quality assurance and inspection plan of Ceramic Polymer GmbH has to be considered. Recommendations for qualified test control units are also available.

HEALTH AND SAFETY
Observe the precautionary notices on the container label, and read the Material Safety Data Sheet before use. The product is intended for use by properly qualified professional applicators in industrial conditions. The product is flammable and should be kept away from sparks, open flames, and other sources of ignition. Smoking is prohibited in the application area. Wear suitable respiratory equipment and apply in well ventilated areas. Avoid contact with skin and eyes.

DISCLAIMER
All technical information in this Product Data Sheet is signified as material description and based on laboratory tests and practical experiences under normal conditions. During individual use, actual measured data may vary due to circumstances beyond our control. In particular, the recommendations regarding the application and use require the proper storage and treatment of our products. Due to differences in materials, substrates and real site conditions Ceramic Polymer GmbH does not assume any warranty or liability for application results or fitness for a particular purpose, of any legal relationship whatsoever, neither from this information, nor from any given recommendations, or from any other oral advice. The user of the product must check the product’s suitability for the intended application and purpose. Ceramic Polymer reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our general terms and conditions of sale and delivery. The most recent issue of the Product Data Sheet has to be considered, please ask always for the current version.