New Guard Coatings Group

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# NOVAGUARD™ 890 CONDUCTIVE

## DESCRIPTION

Two-component, solvent-free amine cured novolac phenolic epoxy coating

## PRINCIPAL CHARACTERISTICS

- One coat conductive tank coating system
- Excellent resistance to crude oil up to 120°C (250°F)
- Approved by German building authorities according to DIBt building code for storage of flammable fuels
- Suitable for storage of unleaded gasolines blended up to 100% ethanol (E5 up to E100)
- Prevents build-up of static electricity in liquids during loading operations
- Suitable for storage of biodiesel (EN14214)
- Good chemical resistance against a wide range of chemicals and solvents
- Extensive chemical resistance list available at www.tankselect.sigmacoatings.com
- Glossy and smooth appearance
- Reduced explosion risk and fire hazard
- Good conductivity property (longitudinal conductivity < 1x10^8 Ohm and conductivity to the steel < 1x10^6 Ohm)

## COLOR AND GLOSS LEVEL

- Black
- Gloss

## BASIC DATA AT 20°C (68°F)

| Data for mixed product | |
|---|---|
| **Number of components** | Two |
| **Mass density** | 1.3 kg/l (10.8 lb/US gal) |
| **Volume solids** | 100% |
| **VOC (Supplied)** | Directive 2010/75/EU, SED: max. 102.0 g/kg<br>max. 135.0 g/l (approx. 1.1 lb/US gal) |
| **Recommended dry film thickness** | 300 - 800 µm (12.0 - 32.0 mils) depending on system |
| **Theoretical spreading rate** | 3.3 $m^2$/l for 300 µm (134 $ft^2$/US gal for 12.0 mils) |
| **Dry to touch** | 8 hours |
| **Overcoating Interval** | Minimum: 24 hours<br>Maximum: 2 months |
| **Full cure after** | 6 days |
| **Shelf life** | Base: at least 12 months when stored cool and dry<br>Hardener: at least 12 months when stored cool and dry |

Notes:
- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

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## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

**Substrate conditions**

- Steel; blast cleaned to a minimum of ISO-Sa2½, blasting profile 50 – 100 µm (2.0 – 4.0 mils)

**Substrate temperature and application conditions**

- Substrate temperature during application and curing should be above 5°C (41°F)
- Substrate temperature during application should be at least 3°C (5°F) above dew point

## INSTRUCTIONS FOR USE

**Mixing ratio by volume: base to hardener 66.7:33.3 (2:1)**

- The temperature of the mixed base and hardener should preferably be, depending on application method between 30°C (86°F) and 40°C (104°F)
- No thinner should be added

**Induction time**

None

**Pot life**

20 minutes at 40°C (104°F)

Note: See ADDITIONAL DATA – Pot life

**Airless spray**

- Single feed airless spray with a maximum paint hose of 30 meters (98 ft) with in-line heater at 30°C (86°F)
- Twin feed airless spray with both components at 40°C (104°F) with paint hose up to 100 meters (328 ft)

**Recommended thinner**

No thinner should be added

**Nozzle orifice**

Approx. 0.53 mm (0.021 in)

**Nozzle pressure**

At 40°C (104°F) paint temperature min. 20.0 MPa (approx. 200 bar; 2901 p.s.i.)

**Brush/roller**

- For stripe coating and spot repair only

**Recommended thinner**

No thinner should be added

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**Cleaning solvent**

THINNER 90-53 or THINNER 90-83

Notes:

- All application equipment must be cleaned immediately after use
- Paint inside the spraying equipment must be removed before the pot life has been expired

## ADDITIONAL DATA

| Spreading rate and film thickness | |
|---|---|
| **DFT** | **Theoretical spreading rate** |
| 300 µm (12.0 mils) | 3.3 $m^2$/l (134 $ft^2$/US gal) |
| 800 µm (32.0 mils) | 1.3 $m^2$/l (50 $ft^2$/US gal) |

Note: Maximum DFT when brushing: 150 µm (6.0 mils)

**Measuring wet film thickness**

- A difference is often obtained between the measured apparent WFT and the real applied WFT. This is due to the thixotropy and the surface tension of the paint, which retards the release of air, trapped in the paint film for some time
- Recommendation is to apply a WFT, which is equal to the specified DFT plus 60 µm (2.4 mils)

| Overcoating interval for DFT up to 600 µm (24.0 mils) | | | | |
|---|---|---|---|---|
| **Overcoating with...** | **Interval** | **10°C (50°F)** | **20°C (68°F)** | **30°C (86°F)** |
| itself | Minimum | 48 hours | 24 hours | 16 hours |
| | Maximum | 3 months | 2 months | 1 month |

Note: Surface should be dry and free from any contamination

| Curing time for DFT up to 600 µm (24.0 mils) | |
|---|---|
| **Substrate temperature** | **Service- water immersion** |
| 10°C (50°F) | 3 days |
| 20°C (68°F) | 36 hours |
| 30°C (86°F) | 24 hours |

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| Curing time for DFT up to 600 µm (24.0 mils) | | |
|---|---|---|
| **Substrate temperature** | **Dry to handle** | **Full cure** |
| 10°C (50°F) | 48 hours | 10 days |
| 20°C (68°F) | 24 hours | 7 days |
| 30°C (86°F) | 16 hours | 4 days |

Note: Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)

| Curing time for DFT up to 600 µm (24.0 mils) | | |
|---|---|---|
| **Substrate temperature** | **Dry to walk on** | **Resistant to vehicular service** |
| 10°C (50°F) | 58 hours | N/A |
| 20°C (68°F) | 30 hours | N/A |
| 30°C (86°F) | 20 hours | N/A |

| Curing time for DFT up to 600 µm (24.0 mils) | | | |
|---|---|---|---|
| **Substrate temperature** | **Dry to handle** | **Minimum cure time for purely aliphatic petroleum product (see note)** | **Minimum cure time for all other chemicals** |
| 10°C (50°F) | 48 hours | 7.5 days | 10 days |
| 20°C (68°F) | 24 hours | 4 days | 7 days |
| 30°C (86°F) | 16 hours | 60 hours | 4 days |

| Pot life (at application viscosity) | |
|---|---|
| **Mixed product temperature** | **Pot life** |
| 30°C (86°F) | 45 minutes |
| 40°C (104°F) | 20 minutes |

Note: Due to exothermic reaction, temperature during and after mixing may increase

## SAFETY PRECAUTIONS

- Although this is a solvent-free paint, care should be taken to avoid inhalation of spray mist, as well as contact between the wet paint and exposed skin or eyes
- Ventilation should be provided in confined spaces to maintain good visibility
- If workers are exposed to concentrations above the exposure limit, they must use appropriate personal protective equipment (PPE).

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## WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective and Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

## REFERENCES

| | | |
|---|---|---|
| • EXPLANATION TO PRODUCT DATA SHEETS | INFORMATION SHEET | 1411 |

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