

# 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](http://www.tankselect.sigmacoatings.com)
- Glossy and smooth appearance
- Reduced explosion risk and fire hazard
- Good conductivity property (longitudinal conductivity <math>< 1 \times 10^8 \text{ Ohm}</math> and conductivity to the steel <math>< 1 \times 10^6 \text{ Ohm}</math>)

## 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 max. 135.0 g/l (approx. 1.1 lb/US gal)
Recommended dry film thickness	300 - 800 $\mu\text{m}$ (12.0 - 32.0 mils) depending on system
Theoretical spreading rate	3.3 $\text{m}^2/\text{l}$ for 300 $\mu\text{m}$ (134 $\text{ft}^2/\text{US gal}$ for 12.0 mils)
Dry to touch	8 hours
Overcoating Interval	Minimum: 24 hours Maximum: 2 months
Full cure after	6 days
Shelf life	Base: at least 12 months when stored cool and dry 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



# NOVAGUARD™ 890 CONDUCTIVE

## 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

---



# NOVAGUARD™ 890 CONDUCTIVE

## 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 <sup>2</sup> /l (134 ft <sup>2</sup> /US gal)
800 µm (32.0 mils)	1.3 m <sup>2</sup> /l (50 ft <sup>2</sup> /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)

## Measuring dry film thickness

- Because of low initial hardness the DFT cannot be measured within some days, due to the penetration of the measuring device into the soft paint film
- The DFT should be measured using a calibration foil of known thickness placed in between the coating and the measuring device

Overcoating interval for DFT up to 800 µm (32.0 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

# NOVAGUARD™ 890 CONDUCTIVE

## Curing time for DFT up to 800 µm (32.0 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)

## 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

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- 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
- No solvent present; however, spray mist is not harmless, a fresh air mask should be used during spraying
- Ventilation should be provided in confined spaces to maintain good visibility

## 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

• CONVERSION TABLES	INFORMATION SHEET	1410
• EXPLANATION TO PRODUCT DATA SHEETS	INFORMATION SHEET	1411
• SAFETY INDICATIONS	INFORMATION SHEET	1430
• SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD	INFORMATION SHEET	1431
• SAFE WORKING IN CONFINED SPACES	INFORMATION SHEET	1433
• DIRECTIVES FOR VENTILATION PRACTICE	INFORMATION SHEET	1434
• CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490
• SPECIFICATION FOR MINERAL ABRASIVES	INFORMATION SHEET	1491
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

# NOVAGUARD™ 890 CONDUCTIVE

## WARRANTY

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

---

## LIMITATIONS OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at [www.ppgpmc.com](http://www.ppgpmc.com). The English text of this sheet shall prevail over any translation thereof.

The PPG logo, and all other PPG marks are property of the PPG group of companies. All other third-party marks are property of their respective owners.

