August 11, 2022 (Revision of January 26, 2022)

# SIGMACOVER™ 522

## DESCRIPTION

Two-component, micaceous iron oxide-pigmented, polyamide-cured epoxy primer/sealer/coating

## PRINCIPAL CHARACTERISTICS

- Excellent adhesion to, and sealing of, weathered-, cleaned-, zinc-rich primers and metal-sprayed steel
- Good adhesion to properly pretreated galvanized steel
- Can be used in systems for atmospheric or water-immersed exposure conditions
- Good resistance to industrial- or chemical-contaminated atmospheric exposure conditions
- Good abrasion and impact resistance
- Pass cryogenic cyclic test from -196°C (-321°F) to 140°C (284°F)
- Resistant to temperatures up to 200°C (390°F) in dry atmospheric exposure conditions

## COLOR AND GLOSS LEVEL

- Redbrown, greenish gray
- Low metallic sheen

## BASIC DATA AT 20°C (68°F)

| Data for mixed product | |
|---|---|
| **Number of components** | Two |
| **Mass density** | 1.8 kg/l (15.0 lb/US gal) |
| **Volume solids** | 60 ± 2% |
| **VOC (Supplied)** | Directive 2010/75/EU, SED: max. 210.0 g/kg<br>max. 374.0 g/l (approx. 3.1 lb/US gal)<br>China GB 30981-2020 (tested) 394.0 g/l (approx. 3.3 lb/gal) |
| **Recommended dry film thickness** | 40 - 100 µm (1.6 - 4.0 mils) depending on system |
| **Theoretical spreading rate** | 15.0 $m^2$/l for 40 µm (602 $ft^2$/US gal for 1.6 mils)<br>6.0 $m^2$/l for 100 µm (241 $ft^2$/US gal for 4.0 mils) |
| **Dry to touch** | 2 hours |
| **Overcoating Interval** | Minimum: 8 hours<br>Maximum: 1 month |
| **Full cure after** | 7 days |
| **Shelf life** | Base: at least 24 months when stored cool and dry<br>Hardener: at least 24 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

# SIGMACOVER™ 522

## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

**Substrate conditions**

- Steel; blast cleaned to ISO-Sa2½, blasting profile 40 – 70 µm (1.6 – 2.8 mils)
- Shop primed steel; sweep blasted to SPSS-Ss or power tool cleaned to SPSS-Pt3
- Zinc rich epoxies and zinc silicates must be dry and free from any contamination
- Galvanized steel; for atmospheric exposure conditions disc sanding, and for water immersed exposure conditions sweep blasting is required
- Stainless steel, non-ferrous metal should be sufficiently roughened by light sanding
- Compatible previous coat must be dry and free from any contamination
- When used as an adhesion primer or when a long overcoating interval is expected a maximum DFT of 50 µm (2.0 mils) must be specified in order to preserve the rough texture

**Substrate temperature**

- Substrate temperature during application and curing should be above 10°C (50°F)
- Ambient temperature during application at 5°C (41°F) is acceptable; however curing to hardness takes longer and complete cure will be reached when the temperature increases
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point

## INSTRUCTIONS FOR USE

**Mixing ratio by volume: base to hardener 82:18**

- The temperature of the mixed base and hardener should preferably be above 15°C (59°F), otherwise extra thinner may be required to obtain application viscosity
- Adding too much thinner results in reduced sag resistance
- Thinner should be added after mixing the components

**Induction time**

None

**Pot life**

8 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

# SIGMACOVER™ 522

**Air spray**

**Recommended thinner**
THINNER 91-92

**Volume of thinner**
10 - 30%, depending on required thickness and application conditions

**Nozzle orifice**
1.5 – 2.0 mm (approx. 0.060 – 0.079 in)

**Nozzle pressure**
0.3 - 0.4 MPa (approx. 3 - 4 bar; 44 - 58 p.s.i.)

**Airless spray**

**Recommended thinner**
THINNER 91-92

**Volume of thinner**
5 - 10%, 30 - 40% when mist coat applied

**Nozzle orifice**
Approx. 0.48 – 0.53 mm (0.019 – 0.021 in)

**Nozzle pressure**
12.0 - 15.0 MPa (approx. 120 - 150 bar; 1741 - 2176 p.s.i.)

**Brush/roller**

**Recommended thinner**
THINNER 91-92

**Volume of thinner**
0 – 5%

## ADDITIONAL DATA

| Spreading rate and film thickness | |
|---|---|
| **DFT** | **Theoretical spreading rate** |
| 40 µm (1.6 mils) | 15.0 $m^2/l$ (602 $ft^2$/US gal) |
| 100 µm (4.0 mils) | 6.0 $m^2/l$ (241 $ft^2$/US gal) |

# SIGMACOVER™ 522

| Overcoating interval for DFT up to 50 µm (2.0 mils) | | | | | | |
|---|---|---|---|---|---|---|
| **Overcoating with...** | **Interval** | **5°C (41°F)** | **10°C (50°F)** | **20°C (68°F)** | **30°C (86°F)** | **40°C (104°F)** |
| two-component epoxies and polyurethanes | Minimum | 36 hours | 16 hours | 8 hours | 6 hours | 4 hours |
| | Maximum | 6 months | 6 months | 6 months | 3 months | 3 months |

| Overcoating interval for DFT up to 100 µm (4.0 mils) | | | | | | |
|---|---|---|---|---|---|---|
| **Overcoating with...** | **Interval** | **5°C (41°F)** | **10°C (50°F)** | **20°C (68°F)** | **30°C (86°F)** | **40°C (104°F)** |
| two-component epoxies and polyurethanes | Minimum | 3 days | 32 hours | 16 hours | 12 hours | 8 hours |
| | Maximum | 28 days | 28 days | 28 days | 14 days | 7 days |

Notes:

- Surface should be dry and free from any contamination
- The minimum overcoating time should be multiplied by 5 when SIGMACOVER 522 is to be applied on top of an existing old (alkyd) primer or coating
- Surface should be properly cleaned
- Glossy finishes require a corresponding undercoat

| Curing time for DFT up to 100 µm (4.0 mils) | | | |
|---|---|---|---|
| **Substrate temperature** | **Dry to touch** | **Dry to handle** | **Full cure** |
| 5°C (41°F) | 8 hours | 18 hours | N/A |
| 10°C (50°F) | 5 hours | 8 hours | 15 days |
| 15°C (59°F) | 3.5 hours | 6 hours | 10 days |
| 20°C (68°F) | 2 hours | 4 hours | 7 days |
| 25°C (77°F) | 1.5 hours | 4 hours | 5 days |

Notes:

- Adequate ventilation must be maintained during application and curing
- For optimum resistance in tank coating systems a minimum substrate temperature of 10°C (50°F) is essential

| Pot life (at application viscosity) | |
|---|---|
| **Mixed product temperature** | **Pot life** |
| 15°C (59°F) | 10 hours |
| 20°C (68°F) | 8 hours |
| 25°C (77°F) | 6 hours |
| 30°C (86°F) | 5 hours |
| 35°C (95°F) | 4 hours |

# SIGMACOVER™ 522

## SAFETY PRECAUTIONS

- See Safety Data Sheet and product label for complete safety and precaution requirements
- This is a solvent-borne paint and care should be taken to avoid inhalation of spray mist or vapor, as well as contact between the wet paint and exposed skin or eyes

## 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 |

## 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. The English text of this sheet shall prevail over any translation thereof.