April 13, 2018 (Revision of February 12, 2018)

# SIGMAZINC™ 109 Y

## (SIGMACAP ZINC 108)

### DESCRIPTION

Two-component, high solids polyamide adduct cured zinc rich epoxy primer

### PRINCIPAL CHARACTERISTICS

- Designed as a system primer for various paint systems
- Excellent anticorrosive properties
- Quick-drying, can be overcoated after a short interval
- Can serve as a holding primer for various maintenance systems for a total repair
- Very good primer for systems with high solids epoxy buildcoats
- Complies with SSPC-Paint 20 level 2 and ISO 12944.5

### COLOR AND GLOSS LEVEL

- Gray, reddish gray
- Flat

### BASIC DATA AT 20°C (68°F)

| Data for mixed product | |
|---|---|
| **Number of components** | Two |
| **Mass density** | 2.6 kg/l (21.7 lb/US gal) |
| **Volume solids** | 65 ± 2% |
| **VOC (Supplied)** | Directive 1999/13/EC, SED: max. 126.0 g/kg<br>max. 327.0 g/l (approx. 2.7 lb/US gal) |
| **Recommended dry film thickness** | 60 - 150 µm (2.4 - 6.0 mils) depending on system |
| **Theoretical spreading rate** | 10.8 $m^2$/l for 60 µm (434 $ft^2$/US gal for 2.4 mils) |
| **Dry to touch** | 2.5 hours |
| **Overcoating Interval** | Minimum: 4 hours<br>See overcoating tables |
| **Full cure after** | 7 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

# SIGMAZINC™ 109 Y

## (SIGMACAP ZINC 108)

### RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

**Atmospheric exposure conditions**

- Steel; blast cleaned to ISO-Sa2½, blasting profile 40 – 70 µm (1.6 – 2.8 mils)
- Steel with approved zinc silicate shop primer; pretreated to to SPSS-Pt3
- Weathered galvanized steel; blast cleaned to remove rust, to roughen the surface and to remove any zinc salts which might be present

**Substrate temperature and application conditions**

- Substrate temperature during application and curing should be above 5°C (41°F)
- 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 80:20 (4:1)**

- 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 and slower cure
- The thinner should be added after mixing the two components

**Induction time**

None

**Pot life**

6 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

**Air spray**

**Recommended thinner**

THINNER 91-92

**Volume of thinner**

0 - 15%, depending on required thickness and application conditions

**Nozzle orifice**

1.8 – 2.2 mm (approx. 0.070 – 0.087 in)

**Nozzle pressure**

0.30 - 0.60 MPa (approx. 3 - 6 bar; 44 - 87 p.s.i.)

# SIGMAZINC™ 109 Y

## (SIGMACAP ZINC 108)

**Airless spray**

**Recommended thinner**
THINNER 91-92

**Volume of thinner**
0 - 15%, depending on required thickness and application conditions

**Nozzle orifice**
Approx. 0.43 – 0.48 mm (0.017 – 0.019 in)

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

**Brush/roller**

**Recommended thinner**
THINNER 91-92

**Volume of thinner**
0 – 10%

**Cleaning solvent**
THINNER 90-53

### ADDITIONAL DATA

| Spreading rate and film thickness | |
|---|---|
| **DFT** | **Theoretical spreading rate** |
| 60 µm (2.4 mils) | 10.8 $m^2/l$ (434 $ft^2$/US gal) |
| 75 µm (3.0 mils) | 8.6 $m^2/l$ (348 $ft^2$/US gal) |
| 100 µm (4.0 mils) | 6.5 $m^2/l$ (261 $ft^2$/US gal) |
| 150 µm (6.0 mils) | 4.3 $m^2/l$ (174 $ft^2$/US gal) |

# SIGMAZINC™ 109 Y

## (SIGMACAP ZINC 108)

| Overcoating interval for DFT up to 100 µm (4.0 mils) | | | | | |
|---|---|---|---|---|---|
| **Overcoating with...** | **Interval** | **10°C (50°F)** | **20°C (68°F)** | **30°C (86°F)** | **40°C (104°F)** |
| recommended topcoats | Minimum | 8 hours | 4 hours | 3 hours | 2 hours |
| | Maximum | 3 months | 3 months | 3 months | 3 months |

Notes:

- Zinc primers can form zinc salts on the surface; preferably they should not be weathered for long periods before overcoating
- In clean exterior conditions, a maximum interval of 3 months can be tolerated, but in industrial or marine conditions this interval should be reduced to the practical minimum
- An interval of several months can be allowed under clean interior exposure conditions
- Before overcoating visible surface contamination must be removed by high-pressure water cleaning, sweep blasting or mechanical cleaning

| Curing time for DFT up to 100 µm (4.0 mils) | | | |
|---|---|---|---|
| **Substrate temperature** | **Dry to touch** | **Dry to handle** | **Full cure** |
| 10°C (50°F) | 5 hours | 6 hours | 20 days |
| 15°C (59°F) | 3 hours | 4 hours | 10 days |
| 20°C (68°F) | 2.5 hours | 3 hours | 7 days |
| 30°C (86°F) | 1 hour | 1.5 hours | 5 days |

Notes:

- This product can be applied at temperatures between 5°C (41°F) and 10°C (50°F), but the curing rate will be very slow
- For such applications alternative zinc rich primers are recommended: SIGMAZINC 19, SIGMAZINC 158 and SIGMAZINC 160 for systems exposed to atmospheric conditions
- 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** |
| 10°C (50°F) | 12 hours |
| 20°C (68°F) | 6 hours |
| 30°C (86°F) | 4.5 hours |
| 40°C (104°F) | 3 hours |

### SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 1430, 1431 and relevant Material Safety Data Sheets
- 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

# SIGMAZINC™ 109 Y

## (SIGMACAP ZINC 108)

### 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 |

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