SIGMAZINC™ 100

DESCRIPTION

Two-component, polyamide-curing zinc primer

PRINCIPAL CHARACTERISTICS

- Designed as a system primer for various paint systems
- Good corrosion prevention properties
- Quick-drying, can be overcoated after a short interval
- The subsequent coat must be unsaponifiable
- LT version is available if temperature is lower than 5°C (41°F)

COLOR AND GLOSS LEVEL

- Gray
- Flat

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	2.0 kg/l (16.7 lb/US gal)
Volume solids	58 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 210.0 g/kg max. 420.0 g/l (approx. 3.5 lb/US gal) China GB 30981-2020 (tested) 372.0 g/l (approx. 3.1 lb/gal)
Recommended dry film thickness	35 - 75 µm (1.4 - 3.0 mils) depending on system
Theoretical spreading rate	16.6 m^2/l for 35 µm (665 ft^2/US gal for 1.4 mils)
Dry to touch	20 minutes
Overcoating Interval	Minimum: 7 hours See overcoating tables
Full cure after	7 days
Shelf life	Base: at least 24 months when stored cool and dry 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

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Steel; shot blast cleaned to ISO-Sa2½, blasting profile 40 – 70 µm (1.6 – 2.8 mils)

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Substrate temperature

- 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 78:22

- 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
- Thinner should be added after mixing the components

Induction time

None

Pot life

24 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

Air spray

Recommended thinner

THINNER 91-92

Volume of thinner

0 - 20%, depending on required thickness and application conditions

Nozzle orifice

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

Nozzle pressure

0.3 - 0.6 MPa (approx. 3 - 6 bar; 44 - 87 p.s.i.)

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Airless spray

Recommended thinner
THINNER 91-92

Volume of thinner
0 - 20%, 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 – 5%

Notes:
- Application by brush may show brush marking, due to the thixatropic nature of the paint and is most suitable to small areas, tight angle areas or for stripe coating or touch-up
- Application by roller will leave roller marking and is suitable for minimum DFT requirements only
- A roller suitable for epoxy application must be used

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
50 µm (2.0 mils)	11.6 m^2/l (465 ft^2/US gal)
65 µm (2.6 mils)	8.9 m^2/l (358 ft^2/US gal)
75 µm (3.0 mils)	7.7 m^2/l (310 ft^2/US gal)

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Overcoating interval for DFT up to 75 µm (3.0 mils)					
Overcoating with...	**Interval**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**	**40°C (104°F)**
various two-pack epoxy coatings	Minimum	10 hours	7 hours	4 hours	3 hours
	Maximum	Extended	Extended	Extended	Extended

Notes:
- Zinc rich primers can form zinc salts on the surface; preferably they should not be weathered for long periods before overcoating
- An interval of several months can be allowed under clean interior exposure conditions
- In clean exterior conditions, a maximum interval of 14 days can be tolerated, but in industrial or marine conditions this interval should be reduced to the practical minimum
- When a long overcoating interval is required, it is recommended to overcoat SIGMAZINC 100 within two days with SIGMACOVER 522
- Before overcoating visible surface contamination must be removed by high-pressure water cleaning, sweep blasting or mechanical cleaning

Curing time for DFT up to 75 µm (3.0 mils)			
Substrate temperature	**Dry to touch**	**Dry to handle**	**Full cure**
10°C (50°F)	1.5 hours	6 hours	21 days
15°C (59°F)	1 hour	4 hours	14 days
20°C (68°F)	30 minutes	2.5 hours	8 days
30°C (86°F)	20 minutes	1.5 hours	6 days
40°C (104°F)	10 minutes	1 hour	4 days

Notes:
- SIGMAZINC 100 can be applied at temperatures down to 5°C (41°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, SIGMAGUARD 750 for systems exposed to immersed 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)	30 hours
20°C (68°F)	24 hours
30°C (86°F)	10 hours
35°C (95°F)	6 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

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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
• 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

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