

DIMETCOTE 3W

DESCRIPTION

Water based inorganic zinc silicate primer

PRINCIPAL CHARACTERISTICS

- Zero VOC formulation
- >80% zinc in dry film
- Provides outstanding corrosion resistance
- Excellent mud cracking resistance
- Resistant to dry temperature up to 750°F(399°C)
- Must not be exposed to alkaline (more than pH 9) or acidic (less than pH 5.5) liquids

COLOR AND GLOSS LEVEL

- Gray
- Flat

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	2.8 kg/l (23.4 lb/US gal)
Volume solids	65 ± 3%
VOC (Supplied)	max. 0.0 g/l (approx. 0.0 lb/US gal)
Recommended dry film thickness	50 - 125 µm (2.0 - 5.0 mils)
Theoretical spreading rate	8.7 m ² /l for 75 µm (348 ft ² /US gal for 3.0 mils)
Overcoating Interval	Minimum: 6 hours
Curing time	6 hours
Shelf life	Binder: at least 9 months when stored cool and dry Powder: at least 24 months when stored cool and dry

Notes:

- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time
- Color will drift at elevated temperatures
- Applications up to 6.0 mils (150 µm) are acceptable with random spot readings up to 9.0 mils (225 µm). For high temperature applications, a maximum of 3.0 mils (75 µm) is allowed

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Atmospheric exposure conditions

- Steel; shot blast cleaned to ISO-Sa2½, blasting profile 40 – 70 µm (1.6 – 2.8 mils)
- Steel with approved zinc silicate shop primer; pretreated 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

- Surface temperature during application should be between 4°C (40°F) and 54°C (130°F)
- Surface temperature during application should be at least 3°C (5°F) above dew point

SYSTEM SPECIFICATION

INSTRUCTIONS FOR USE

- Mixing ratio by volume: binder to powder 67.3:32.7
- Many of PPG's zinc silicates are supplied as two-pack materials consisting of a container with pigmented binder and a drum containing a bag of zinc powder.
- To ensure proper mixing of both components, the instructions given below must be followed
- [1] Take the bag with zinc powder out of the drum
- [2] Shake the binder in the jerrycan a few times to reach a certain degree of homogenization
- [3] Pour about 2/3 of the binder into the empty drum
- [4] With the jerrycan now reduced in weight and containing more free space, shake it vigorously to obtain a homogeneous mix with no deposits left on the bottom, and add this to the drum
- [5] Add the zinc powder gradually to the pigmented binder in the drum and, at the same time, continuously stir the mixture by using a mechanical mixer (keep the speed low)
- [6] Stir the zinc dust powder thoroughly through the binder (high speed) and keep stirring until a homogeneous mixture is obtained
- [7] Strain mixture through a 30 – 60 mesh screen
- [8] Agitate continuously during application (low speed). The use of a dedicated pump with a constant agitation for a zinc silicate coating is recommended

Note: At application temperature above 30°C (86°F) addition of max 3% by volume of clean water may be necessary.

Induction time

None

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Pot life

8 hours at 21°C (70°F)

Note: See ADDITIONAL DATA – Pot life

Application

- Area should be sheltered from airborne particulates and pollutants
 - Ensure good ventilation during application and curing
 - Provide shelter to prevent wind from affecting spray patterns
 - Curing in stagnant air conditions will lead to a smooth, glazed finish that will require abrading prior to overcoating
 - Mist spray: A mist coat / full coat application technique is required when topcoating to prevent application bubbling. Lightly rub dry spray from the surface prior to overcoating
 - Repair: When dry though, measure the dry film thickness. If film thickness is lower than specified, apply additional material as soon as possible, but not to exceed 24 hours from the previous application. Ensure any dry spray is removed
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Air spray

Recommended thinner

Tap water (normally no thinner required)

Volume of thinner

0 - 3%

Nozzle orifice

2.0 mm (approx. 0.079 in)

Nozzle pressure

0.3 MPa (approx. 3 Bar; 44 p.s.i.)

Note: A dedicated pump for a zinc silicate coating with constant agitation must be used

Airless spray

Recommended thinner

Tap water (normally no thinner required)

Volume of thinner

0 - 3%

Nozzle orifice

Approx. 0.48 – 0.64 mm (0.019 – 0.025 in)

Nozzle pressure

9.0 - 12.0 MPa (approx. 90 - 120 bar; 1306 - 1741 p.s.i.)

Note: A dedicated pump for a zinc silicate coating with constant agitation must be used

Brush/roller

- Only for touch-up and repair

Recommended thinner

Tap water

Volume of thinner

0 - 3%



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Cleaning solvent

Tap water

Note: All application equipment must be cleaned immediately after use

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
50 µm (2.0 mils)	13.0 m ² /l (521 ft ² /US gal)
75 µm (3.0 mils)	8.7 m ² /l (348 ft ² /US gal)
100 µm (4.0 mils)	6.5 m ² /l (261 ft ² /US gal)
125 µm (5.0 mils)	5.2 m ² /l (209 ft ² /US gal)

Notes:

- Above 150 µm (6.0 mils) mudcracking can occur
- Maximum DFT when brushing: 35 µm (1.4 mils)

Overcoating interval for DFT up to 125 µm (5.0 mils)					
Overcoating with...	Interval	40°F (4°C)	50°F (10°C)	70°F (21°C)	90°F (32°C)
epoxy coatings	Minimum	24 hours	12 hours	6 hours	4 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited

Note: Surface must be clean and dry. Surface must be power washed to remove all surface contaminants including zinc salts and alkaline salts formed during the curing process. In all cases, it is necessary to rinse the steel to remove alkaline salts prior to exterior storage. It is highly advisable to rinse the steel prior to topcoating when steel will be subject to ponding water or condensation from high humidity conditions in service. Rinsing should be done with clean water until the surface pH is 8 or lower as measured in several locations.

Curing time for DFT up to 125 µm (5.0 mils)		
Substrate temperature	Dry to touch	Full cure
4°C (39°F)	40 minutes	24 hours
10°C (50°F)	30 minutes	12 hours
21°C (70°F)	20 minutes	6 hours
32°C (90°F)	10 minutes	3 hours

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Pot life (at application viscosity)	
Mixed product temperature	Pot life
4°C (39°F)	18 hours
10°C (50°F)	12 hours
21°C (70°F)	8 hours
32°C (90°F)	5 hours

Product Qualifications

- Zinc dust meets ASTM D520 type 2 standards

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

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

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