

# SIGMATHERM™ 540

## DESCRIPTION

One-component, heat-resistant, moisture-curing silicone aluminum

## PRINCIPAL CHARACTERISTICS

- Dry heat resistance up to 600°C (1112°F)
- No heat cure necessary between coats
- To be used for the internal and external protection of steel surfaces
- Excellent resistance against weathering
- Also suitable on top of zinc silicate primer
- A minimum drying time of 3 days at 20°C (68°F) should be allowed before exposure to heat

## COLOR AND GLOSS LEVEL

- Aluminum and black
- Eggshell

## BASIC DATA AT 20°C (68°F)

Data for product	
Number of components	One
Mass density	1.1 kg/l (9.2 lb/US gal)
Volume solids	45 ± 2%
VOC (Supplied)	Directive 2010/75/EU, SED: max. 412.0 g/kg UK PG 6/23(92) Appendix 3: max. 498.0 g/l (approx. 4.2 lb/US gal)
Temperature resistance (Continuous)	To 600°C (1110°F)
Recommended dry film thickness	25 µm (1.0 mils)
Theoretical spreading rate	18.0 m <sup>2</sup> /l for 25 µm (722 ft <sup>2</sup> /US gal for 1.0 mils)
Dry to touch	45 minutes
Overcoating Interval	Minimum: 16 hours
Shelf life	At least 15 months when stored cool and dry

### Notes:

- See ADDITIONAL DATA - Overcoating intervals
- See ADDITIONAL DATA - Curing time

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## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

### Substrate conditions

- Steel; blast cleaned to ISO Sa 2½ or SSPC-SP-10, blasting profile 25 – 50 µm (1.0 – 2.0 mils)
- Suitable coating (zinc silicate primer) must be dry, free from any contamination and zinc salts
- Stainless steel; degreased and sweep blast (SSPC SP-16) cleaned to roughness of 40 – 70 µm (1.5 – 2.8 mils) with non-ferrous abrasive

Note: The maximum continuous dry heat temperature when power tool treated surface (ISO-St3) is 400°C

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### Substrate temperature and application conditions

- Substrate temperature during application should be at least 3°C (5°F) above dew point
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## SYSTEM SPECIFICATION

- Suitable Primers : PPG Ethyl Silicate Zinc Primers
  - Do not use HI-TEMP 1027 or 222G as primer
  - Direct to stainless steel with suitable surface treatment
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## INSTRUCTIONS FOR USE

- Power agitate to uniform consistency
  - Application with airless equipment is possible, but be careful not to apply more than specified thickness
  - When applying more than one coat, it is recommended that the total dry film thickness of SIGMATHERM 540 does not exceed 80 µm (3.1 mils)
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### Air spray

#### **Recommended thinner**

No thinner should be added

#### **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.)

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### Brush/roller

- For Roller application the best results will be obtained by using fine foam type rollers
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### Cleaning solvent

THINNER 21-06

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## ADDITIONAL DATA

Overcoating interval for DFT up to 25 µm (1.0 mils)					
Overcoating with...	Interval	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
itself	Minimum	24 hours	16 hours	12 hours	6 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited

Note: Surface should be dry and free from any contamination

Curing time for DFT up to 25 µm (1.0 mils)		
Substrate temperature	Dry to touch	Dry to handle
10°C (50°F)	1 hour	5 hours
20°C (68°F)	45 minutes	3.5 hours
30°C (86°F)	30 minutes	2 hours
40°C (104°F)	15 minutes	1 hour

Note: Adequate ventilation must be maintained during application and curing (please refer to INFORMATION SHEETS 1433 and 1434)

## 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
• 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

# SIGMATHERM™ 540

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