

PPG SIGMADUR™ 550 H

DESCRIPTION

Two-component, high solids, high-build aliphatic acrylic polyurethane finish

PRINCIPAL CHARACTERISTICS

- Excellent resistance to atmospheric exposure conditions
- Good color and gloss retention
- Cures at temperatures down to -5°C (23°F)
- Resistant to splash of mineral and vegetable oils, paraffins, aliphatic petroleum products and mild chemicals
- Can be recoated even after long atmospheric exposure
- Good application properties by airless, brush and roller
- High film build-up to 150 µm (6.0 mils) for one coat
- Can be applied direct to metal
- Drying and curing times can be reduced significantly using PPG 866M ACCELERATOR

COLOR AND GLOSS LEVEL

- Standard and custom colors
- Gloss

BASIC DATA AT 20°C (68°F)

| Data for mixed product | |
|---------------------------------------|--|
| Number of components | Two |
| Mass density | 1.5 kg/l (12.5 lb/US gal) |
| Volume solids | 70 ± 2% |
| VOC (Supplied) | Directive 2010/75/EU, SED: max. 220.0 g/kg EPA Method 24: 238.0 g/ltr (2.0 lb/USgal) |
| Recommended dry film thickness | 50 - 150 µm (2.0 - 6.0 mils) depending on system |
| Theoretical spreading rate | 14.0 m²/l for 50 µm (561 ft²/US gal for 2.0 mils) 9.3 m²/l for 75 µm (374 ft²/US gal for 3.0 mils) |
| Overcoating Interval | Minimum: 8 hours Maximum: Unlimited |
| Shelf life | Base: at least 36 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

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Substrate conditions

- Steel; blast cleaned to ISO-Sa2½, blasting profile 40 – 70 µm (1.6 – 2.8 mils) or power tool cleaned to ISO-St3
- Compatible previous coat must be dry and free from any contamination

Substrate temperature and application conditions

- Substrate temperature during application and curing should be at least 3°C (37°F) above dew point
- Substrate temperature during application and curing down to -5°C (23°F) is acceptable; provided the substrate is free from ice and dry
- Relative humidity during application and curing should not exceed 85%
- Premature exposure to early condensation and rain may cause color and gloss change

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 87:13 (6.69:1)

- Do not thin more than is required by appropriate application property
- Adding too much thinner results in reduced sag resistance
- Thinner should be added after mixing the components

Air spray

Recommended thinner

THINNER 21-06

Volume of thinner

10 - 15%, depending on required thickness and application conditions

Nozzle orifice

1.0 - 1.5 mm (approx. 0.040 - 0.060 in)

Nozzle pressure

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

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Airless spray

Recommended thinner

THINNER 21-06

Volume of thinner

0 - 10%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.43 – 0.48 mm (0.017 – 0.019 in)

Nozzle pressure

20.0 MPa (approx. 200 bar; 2901 p.s.i.)

Brush/roller

Recommended thinner

THINNER 21-06

Volume of thinner

0 – 5%

Cleaning solvent

- THINNER 90-53

ADDITIONAL DATA

| Spreading rate and film thickness | |
|--|--|
| DFT | Theoretical spreading rate |
| 50 µm (2.0 mils) | 14.0 m ² /l (561 ft ² /US gal) |
| 75 µm (3.0 mils) | 9.3 m ² /l (374 ft ² /US gal) |
| 100 µm (4.0 mils) | 7.0 m ² /l (281 ft ² /US gal) |
| 150 µm (6.0 mils) | 4.7 m ² /l (187 ft ² /US gal) |

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Overcoating interval for DFT up to 150 µm (6.0 mils)

| Overcoating with... | Interval | -5°C (23°F) | 0°C (32°F) | 10°C (50°F) | 20°C (68°F) | 30°C (86°F) | 40°C (104°F) |
|---------------------|----------|-------------|------------|-------------|-------------|-------------|--------------|
| itself | Minimum | 36 hours | 24 hours | 16 hours | 8 hours | 4 hours | 2 hours |
| | Maximum | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited |

Overcoating interval with PPG 866M ACCELERATOR for DFT up to 150 µm (6.0 mils)

| Overcoating with... | Interval | -5°C (23°F) | 0°C (32°F) | 10°C (50°F) | 20°C (68°F) | 30°C (86°F) | 40°C (104°F) |
|---------------------|----------|-------------|------------|-------------|-------------|-------------|--------------|
| itself | Minimum | 28 hours | 20 hours | 12 hours | 6 hours | 3 hours | 1.5 hours |
| | Maximum | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited | Unlimited |

Note:

- Surface must be dry and free from any contamination

Curing time for DFT up to 150 µm (6.0 mils)

| Substrate temperature | Dry to touch | Dry to handle | Full cure |
|-----------------------|--------------|---------------|-----------|
| -5°C (23°F) | 24 hours | 40 hours | 22 days |
| 0°C (32°F) | 15 hours | 30 hours | 18 days |
| 10°C (50°F) | 5 hours | 20 hours | 10 days |
| 20°C (68°F) | 3 hours | 12 hours | 7 days |
| 30°C (86°F) | 2 hours | 6 hours | 4 days |
| 40°C (104°F) | 1 hour | 3 hours | 3 days |

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| Curing time with PPG 866M ACCELERATOR for DFT up to 150 µm (6.0 mils) | | | |
|---|--------------|---------------|-----------|
| Substrate temperature | Dry to touch | Dry to handle | Full cure |
| -5°C (23°F) | 21 hours | 32 hours | 18 days |
| 0°C (32°F) | 12 hours | 24 hours | 15 days |
| 10°C (50°F) | 4 hours | 15 hours | 8 days |
| 20°C (68°F) | 2 hours | 8 hours | 6 days |
| 30°C (86°F) | 1.5 hours | 4 hours | 3 days |
| 40°C (104°F) | 1 hour | 2 hours | 48 hours |

Notes:

- Adequate ventilation must be maintained during application and curing
- Premature exposure to early condensation and rain may cause color and gloss change

| Pot life (at application viscosity) | |
|-------------------------------------|-----------|
| Mixed product temperature | Pot life |
| 10°C (50°F) | 4 hours |
| 20°C (68°F) | 2.5 hours |
| 30°C (86°F) | 1.5 hours |
| 40°C (104°F) | 1 hour |

Note:

- Mixing this product with PPG 866M ACCELERATOR will not affect the pot life

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
- Contains a polyisocyanate curing agent

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & 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

- Information sheet | Explanation of product data sheets

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