

NOVAGUARD™ 4701

DESCRIPTION

Glass flake vinyl ester primer

PRINCIPAL CHARACTERISTICS

- Suitable for application to steel or concrete
- Suitable holding primer for NOVAGUARD 4801
- Suitable for service temperature >80°C (176°F) when overcoated with NOVAGUARD 4801 dependent on the actual environment

COLOR AND GLOSS LEVEL

- Slightly amber (translucent)
- Flat

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.1 kg/l (8.8 lb/US gal)
Volume solids	91%
Recommended dry film thickness	45 - 120 µm (1.8 - 4.7 mils)
Theoretical spreading rate	18.2 m ² /l for 50 µm (730 ft ² /US gal for 2.0 mils) 9.1 m ² /l for 100 µm (365 ft ² /US gal for 4.0 mils)
Overcoating Interval	1.5 hours
Shelf life	Base: at least 6 months when stored cool and dry Catalyst: at least 6 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
- Nominal value: Product contains volatile liquid convertible to solids. Volume solids obtained will vary dependent upon polymerization conditions

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Steel

- Steel; blast cleaned to ISO Sa2½, SSPC-SP10
- This primer should not be used where there is a risk of contaminant above pH 9



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Concrete

- Dried for at least 28 days in good ventilation conditions
 - Moisture content should not exceed 4.5%
 - Concrete must be sound, dry, free from laitance and any contamination
 - Rough surface; eventually abraded by power tool or diamond abrading tool
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Substrate temperature and application conditions

- Substrate temperature during application and curing should be above 10°C (50°F)
 - Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
 - Relative humidity during application and curing should not exceed 85%
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INSTRUCTIONS FOR USE

Mixing ratio by volume: base to catalyst 98:2

- The reaction between the base component and catalyst is highly exothermic, deviation from the recommended mixing ratio should not be undertaken.
 - Pre-mix base component with a pneumatic air mixer at moderate speeds to homogenize the container
 - Add the catalyst while stirring the base
 - Mix thoroughly before application
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Pot life

1 hour at 20°C (68°F)

Note: The pot life will vary substantially with temperature

Application

- Never add any solvent
 - Never add the catalyst without continuous stirring
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Airless spray

- Airless pump 30:1 or greater, fit leather or FPTE seals and remove fluid filters, 10 mm diameter (0.375 in) nylon-lined hoses
 - Typical tip size is 0.46 – 0.74 mm (0.018 – 0.029 in) with reverse clean and 45° fan pattern
 - The size of tip and fan pattern will vary with the nature of the work
 - Use pressure to suit hose lengths and working conditions (circa 200 bar)
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Brush/roller

- For small areas only (touch up and repair)

Note: Surface should be flash blasted to provide physical key

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Cleaning solvent

THINNER 50-02

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
50 µm (2.0 mils)	18.2 m ² /l (730 ft ² /US gal)
100 µm (4.0 mils)	9.1 m ² /l (365 ft ² /US gal)

Overcoating interval for DFT up to 120 µm (4.7 mils)					
Overcoating with...	Interval	10°C (50°F)	20°C (68°F)	30°C (86°F)	40°C (104°F)
NOVAGUARD 4801	Minimum	3 hours	1.5 hours	1 hour	less than 1 hour
	Maximum	4 days	3 days	36 hours	24 hours

Notes:

- The maximum recoating time will reduce significantly at high temperature or in strong sunlight
- Once the maximum recoating time has been reached, adhesion values attained by an subsequent coat will reduce dramatically
- When this occurs, overcoating should be treated as repair with the coating flash blasted to provide a physical key
- Styrene cannot be used to reactivate the surface of this product and may impair adhesion
- Take care to avoid contamination before application or subsequent coat

Curing time for DFT up to 120 µm (4.7 mils)	
Substrate temperature	Dry to handle
10°C (50°F)	12 hours
20°C (68°F)	8 hours
30°C (86°F)	6 hours
40°C (104°F)	3 hours

Notes:

- Full cure times are irrelevant for this product as it is purely a holding primer
- Adequate ventilation must be maintained during application and curing

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SAFETY PRECAUTIONS

- Since improper use and handling can be hazardous to health and cause of fire or explosion, safety precautions included with Product Data/Application Instruction and Material Safety Data Sheet must be observed during all storage, handling, use and drying periods
- The catalyst of this product is supplied in small polythene bottles separately from the pigmented base component
- It is a highly reactive, combustible and thermally unstable substance that can undergo self-accelerating decomposition
- It is also a powerful oxidizing agent and will react violently with other organic chemicals
- It is thus recommended to keep in original containers, to hold within the predetermined temperature limits, to prevent contact/contamination with other materials, and to minimize the quantity at the workplace – only have enough present for the job in hand
- The waste of this product should be treated with special care; please contact your PPG representative for more details

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
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

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