PPG NOVAGUARD™ 4801

DESCRIPTION

Two-component, glass flake reinforced novolac vinyl ester

PRINCIPAL CHARACTERISTICS

- High performance coating for new or old steel
- Excellent resistance to chemicals at high temperatures
- Excellent resistance to (in)organic acids
- Good resistance to a wide range of solvents
- Suitable for high temperature immersion
- Suitable for application on concrete on top of Novaguard 4701

COLOR AND GLOSS LEVEL

- White
- Flat

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.2 kg/l (10.0 lb/US gal)
Volume solids	99%
Recommended dry film thickness	500 - 1500 µm (20.0 - 60.0 mils)
Theoretical spreading rate	1.6 m^2/l for 500 µm (64 ft^2/US gal for 20.0 mils) 0.5 m^2/l for 1500 µm (21 ft^2/US gal for 60.0 mils)
Full cure after	4 days
Shelf life	Base: at least 6 months when stored cool and dry Catalyst: at least 6 months when stored cool and dry

Notes:

- A film shrinkage up to 20% can be expected, due to the specific reaction mechanism and depending on conditions
- Frequent temperature cycles may shorten the shelf life
- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

Steel

- Steel; blast cleaned to ISO Sa2½ or SSPC-SP10, blasting profile 50 – 75 µm (2.0 – 3.0 mils)

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Coated concrete

- Suitable primer must be dry and free from any contamination

Substrate temperature

- 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

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to catalyst 49:1

- 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

Application

- Never add any solvent
- Never add the catalyst without continuous stirring
- Never add more than the recommended amount of catalyst

Pot life

50 minutes at 20°C (68°F)

Note:

- The pot life will vary substantially with temperature

Airless spray

- AIRLESS PUMP 45:1 or greater, fit leather or PTFE seals and remove fluid filters, 10 mm diameter (0.375 in) nylon-lined hoses, large-bore gun with 0.6 to 1.5 mm (0.024 to 0.059 in) reverse clean tip
- Typical tip size is 0.75 – 0.85 mm (0.030 – 0.033 in) with reverse clean and 45° fan
- The size of tip and fan pattern will vary with the nature of the work
- Pressure to suit hose lengths and working conditions (circa 200 bar)

Cleaning solvent

- THINNER 50-02

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ADDITIONAL DATA

Spreading rate and film thickness	
DFT	**Theoretical spreading rate**
500 µm (20.0 mils)	1.6 m^2/l (64 ft^2/US gal)
750 µm (30.0 mils)	1.1 m^2/l (43 ft^2/US gal)
1500 µm (60.0 mils)	0.5 m^2/l (21 ft^2/US gal)

Overcoating interval for DFT up to 1000 µm (40.0 mils)					
Overcoating with...	**Interval**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**	**40°C (104°F)**
itself	Minimum	5 hours	2.5 hours	1 hour	less than 1 hour
	Maximum	4 days	48 hours	36 hours	18 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
- Styrene cannot be used to reactivate the surface of this product and may impair adhesion
- Surface should be dry and free from any contamination before recoating

Curing time for DFT up to 1500 µm (60.0 mils)		
Substrate temperature	**Dry to handle**	**Full cure**
10°C (50°F)	24 hours	5 days
20°C (68°F)	18 hours	3 days
30°C (86°F)	12 hours	48 hours
40°C (104°F)	6 hours	24 hours

Note:

- 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
- Although this is a solvent-free coating, care should be taken to avoid inhalation of spray mist, as well as contact between the wet coating and exposed skin or eyes
- The catalyst of this product is supplied in small polythene bottles separately from the pigmented base component
- The catalyst of this product is an organic peroxide which 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 & 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

- Guide | NOVAGUARD 4701 & 4801 | Application manual
- Information sheet | Explanation of product data sheets

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