AMERCOAT®

Dimetcote® 9N

Inorganic Zinc Silicate

Product Data/ Application Instructions

- Suitable for nuclear environments that require radiation tolerance and decontaminable surfaces
- Tested in accordance with ANSI 101.2, ANSI N 5.12, ASTM D5144, ASTM D3911 and the specific requirements of Westinghouse AP1000
- Qualified for various nuclear Level 1 applications

Typical Uses

Dimetcote 9N provides excellent protection to prepared steel and concrete exposed to splash, spillage and fumes of corrosive chemical and weather environments.

Level 1* Qualified Systems

1st Coat	2nd Coat	3rd Coat
Dimetcote 9N	Amercoat 90N	Amercoat 90N

** Please contact PPG PMC Technical Service for specific system designs.*

Physical Data

Finish	Flat	
Color	Green	
Components	2	
Curing mechanism	Solvent release and reaction with atmosphere moisture	
Volume solids (calculated)	63% ± 3%	
Dry film thickness per coat (typical)	2-3 mils (50-75 microns)	
Dry film thickness per coat (required for AP1000)	2-6 mils (50-150 microns)	
Coats (typical)	1	
Theoretical coverage	ft^2/gal	m^2/L
1 mil (25 microns)	994	24.4
2.5 mils (69 microns)	398	9.7
VOC	lb/gal	g/L
mixed	4.2	504
Temperature resistance (continuous)	°F	°C
	750	400
Flash point (SETA)	°F	°C
liquid	60	15
Amercoat 65N	78	25
Amercoat 101N	145	63
Amercoat 12	2	-17

Application Data

Surface preparation steel	SSPC-SP5(Sa 3) or 10(Sa 2½)	
Surface preparation steel (AP1000)	SSPC-SP10(Sa 2½) 1½ - 2½ mil surface profile	
Mixing ratio (by volume)	as packaged	
Pot life (hours)	°F/°C	
	70/21	
	24	
Environmental conditions		
Temperature	°F	°C
air	0 to 120	-18 to 49
surface	0 to 130	-18 to 54

Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation.

Surface Preparation

Steel – New without pits or depressions – Dry abrasive blast, SSPC-SP6 or pickle.

Previously painted or pitted – Dry abrasive blast, SSPC-SP10. Remove all traces of previous organic coatings as Dimetcote 9N will not adhere to organic coatings.

Blast to achieve a 1- to 2-mil (25- to 50-microns) profile as determined with a Keane-Tator Surface Profile Comparator, Testex Tape or similar device. Rougher profiles are acceptable but require increased film thickness for equivalent protection.

Apply Dimetcote 9N as soon as possible to avoid rusting or other recontamination. Do not leave blasted steel uncoated overnight. Spot reblast if needed.

Surface Preparation (AP1000)

Steel – New without pits or depressions – All surfaces to be coated shall be clean, dry, and free of dirt, grease, oil, moisture, or other foreign matter. Contaminants shall be scraped off. The area shall be cleaned or washed with a solution capable of removing contaminants.

Visible burrs, slivers, scabs and weld spatter shall be mechanically removed prior to surface preparation.

Dry abrasive blast, to SSPC-SP10 with a surface profile of 1½ - 2½ mils (37-63 microns)

Environmental Conditions

Temperature	°F	°C
air	0 to 120	-18 to 49
surface	0 to 130	-18 to 54

Surface temperature must be at least 5°F (3°C) above dew point to prevent condensation. At freezing temperatures, surface must be free of ice.

Application Equipment

The following is a guide; suitable equipment from other manufacturers may be used. Changes in pressure, hose and tip size may be needed for proper spray characteristics.

Airless spray – Standard equipment, such as Graco Bulldog Hydra-Spray or Speeflo Alaskan PZ and a fluid tip with a 0.021-inch (0.53 mm) orifice or larger

Conventional spray – Industrial equipment such as a DeVilbiss MBC gun with 2E or 704E cap/tip, or a Binks 18 gun with a 66SS x 67PB nozzle setup. A variable speed agitator in the pressure pot and an oil and moisture trap in the main air supply line are essential. Separate air and fluid pressure regulators are recommended.

Power mixer – Jiffy Mixer, powered by an air or explosion-proof electric motor

Application Procedure

Dimetcote 9N is packaged in the correct proportions which must be mixed together before use.

1. Flush all equipment with thinner or Amercoat® 12 to remove any moisture which that may be present. Moisture can cause hardening of coating in equipment.
2. Stir liquid with an explosion-proof power mixer.
3. Discard desiccant bag from powder can and gradually stir powder into liquid. Continue stirring until powder is well dispersed, and uniformly blended to a workable consistency.
4. Strain material through 30 mesh screen to remove undispersed material and to prevent possible clogging of equipment.
5. Do not mix more coating than will be used within the following times:

Pot life (hours)	°F/°C			
	120/49	90/32	70/21	50/10
	4	12	24	72

***Important** – At the end of the pot life, "kick-out" or separation of liquid and solids occurs, together with gassing. Do not keep mixed material which will not be used before the end of the pot life in tightly closed containers as gassing can create enough pressure to cause containers to burst. Cover containers loosely.*

6. Keep containers loosely covered until ready to use to prevent skinning or gelling due to moisture in air. Skins should be skimmed off the top and the material strained through cheesecloth or 30 mesh screen to remove any remaining pieces of skin. Discard gelled material.
7. Thin only for workability or when a rough film or "dry spray" is obtained due to fast solvent evaporation during hot weather or high wind. Use no more than 1 pint thinner per gallon mixed coating, as follows:

Surface temperature	Thinner
above 70°F	Amercoat 101N
below 70°F	Amercoat 65N

8. Adjust spray equipment to apply an even wet coat with minimum overspray.
9. Continue slow stirring during application to maintain uniformity of material. Avoid fast stirring as this may cause a rise in material temperature, shortening pot life.
10. Apply in even, parallel passes; overlap each pass 50 percent. Pay special attention to welds, cut-outs, sharp edges, rivets, bolts, etc., to insure proper thickness. Keep pressure pot at approximately the same elevation as spray gun for proper material delivery to gun.
11. Prevent contact with water until the freshly applied coating is dry to touch.

Drying time (ASTM D1640) 2½ mils and 50-90% RH

	°F/°C
	70/21
touch (minutes)	10
through (minutes)	18
topcoat with most topcoats (hours)	24

12. When dry through, check film thickness with a nondestructive dry film thickness gauge. Recoat if greater thickness is required. Normal recommended thickness is 2½ mils. Allowable thickness range is 2 to 8 mils, assuming the surface profile is within the recommended range. Greater thicknesses may develop cracking.

***Note** – Drying and topcoating times will be longer when film thickness is over 2½ mils, ventilation and air movement are restricted, temperatures are lower or relative humidities are lower. A water mist sprayed over the coating when the film is dry to touch will accelerate hardening at lower humidities.*

13. Random pinholes, holidays and small damaged or bare areas can be touched up by brush when film is dry to touch. Larger areas should be resprayed.

14. In confined areas, ventilate with clean air during application and drying until all solvents are removed. Temperature and relative humidity of the ventilating air must be such that moisture will not condense on the surface until after dry to touch.

15. Clean equipment with thinner or Amercoat 12 cleaner immediately after use or at least at the end of each working day or shift. Clean spray guns more often during hot weather. When left in equipment, Dimetcote 9N will harden and plug spray equipment.

Safety Precautions

Read each component's Material Safety Data Sheet before use. Mixed material has hazards of each component. Safety precautions must be strictly followed during storage, handling and use.

CAUTION – Improper use and handling of this product can be hazardous to health and cause fire or explosion.

Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: implementation of proper ventilation, use of proper lamps, wearing of proper protective clothing and masks, tenting and proper separation of application areas. Consult your supervisor. Proper ventilation and protective measures must be provided during application and drying to keep spray mists and vapor concentrations within safe limits and to protect against toxic hazards. Necessary safety equipment must be used and ventilation requirements carefully observed, especially in confined or enclosed spaces, such as tank interiors and buildings.

This product is to be used by those knowledgeable about proper application methods. PPG makes no recommendation about the types of safety measures that may need to be adopted because these depend on application environment and space, of which PPG is unaware and over which it has no control.

If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product.

Note: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable federal, state and local regulations on safe practices in coating operations.

This product is for professional use only. Not for residential use in California.

Shipping Data

Packaging units	1 gal	5 gal
Shipping weight (approx)	lb	kg
1-gal unit		
liquid	7.6	3.4
powder	14.5	6.6
5-gal unit		
liquid	36	16.4
powder	71	32.2

Shelf life when stored indoors at 40 to 100°F (5 to 38°C)

powder	2 years from shipment date
liquid	18 months from manufacture date

Numerical values are subject to normal manufacturing tolerances, color and testing variances. Allow for application losses and surface irregularities.

The mixed product is nonphotochemically reactive as defined by the South Coast Air Quality Management District's Rule 102 or equivalent regulations.

PPG Protective & Marine Coatings
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