AMERON
INTERNATIONAL
Performance Coatings & Finishes

Dimetcote® 9HS

Inorganic zinc silicate primer

Product Data/ Applications Instructions

- Innovative ethyl silicate formulation provides:
- High volume solids
- Fast drying properties for ease in handling
- High abrasion resistance
- VOC compliance
- No lead or chromate pigments added
- Superior corrosion resistance

Typical Uses

As a single coat, Dimetcote 9HS resists severe weathering and marine environments. When used as a primer with recommended topcoats, Dimetcote 9HS is resistant to industrial chemical exposure. Dimetcote 9HS systems can be used for structural steel, piping, tank exteriors, bridges, offshore platforms, marine hulls, superstructures and decks.

Recommended Topcoats

Standard midcoats/topcoats such as:

Amercoat® 370	Amercoat 235
Amercoat® 385	Amercoat 230
Amerlock® 400, 400FD	PSX® 700

Amercoat 220 with Amercoat 856 Additive

Dimetcote 9HS surface must be clean and dry before topcoating. Water soluble contaminants may be washed off with water. Remove grease and similar contaminants with an emulsion type cleaner or neutral detergent. Rinse with clean water and allow to dry. Solvent wiping is not satisfactory as contamination may only be spread and not removed. In some cases a mist coat/full coat technique may be required to prevent application bubbling.

Surface Preparation

Coating performance is proportional to the degree of surface preparation. Surface must be cleaned, dry, undamaged and free of all contaminants, including salt deposits. Round off all rough welds and sharp edges, remove all weld spatter. Apply Dimetcote 9HS as soon as possible to avoid rusting or other recontamination. Do not leave blasted steel uncoated overnight. Spot blast if needed.

Steel – New, without pits or depressions, SSPC-SP6. Previously painted or pitted steel uncoated, without pits or depressions, SSPC-SP10. Remove all traces of previous organic coatings as Dimetcote 9HS will not adhere to organic coatings.

Blast to achieve a 1 - 2-mils (25 - 50-microns) anchor profile as indicated by a Keane-Tator Surface Profile Comparator, Testex Tape or similar device. Rougher profiles are acceptable, but require increased film thickness for equivalent protection. Remove abrasive residue or dust from surface.

Galvanized surfaces – Remove any oil, soap film or grease from surface with neutral detergent or emulsion cleaner and roughen surface by light abrasive blast SSPC-SP7.

Physical Data

Finish	Flat	
Color*	Green	

***Note:** At temperatures over 350°F the Dimetcote 9HS green color will change to a reddish-gray.*

Components	2	
Curing mechanism	Solvent release and reaction with atmospheric moisture	
Dry film thickness per coat	3-4 mils	75-100 microns
Coats	1	
Theoretical coverage	ft^2/gal	m^2/L
1 mil (25 microns)	1283	31.5
3 mils (75 microns)	427	10.5
VOC	lb/gal	g/L
mixed	2.7	323
mixed/thinned ($^1/_8$ pt/gal)	2.8	336
mixed/thinned ($^1/_2$ pt/gal)	3.0	362
mixed/thinned (1 pt/gal)	3.3	394
Temperature resistance, dry	°F	°C
continuous	750	399
Flash point (SETA)	°F	°C
liquid	55	13
mixed	55	13
Amercoat 930	214	101
Amercoat 936	140	60
Amercoat 12	2	-17

Application Data

Applied over	Prepared steel or galvanizing		
Surface preparation	SSPC-SP6 or 10		
Method	Airless or conventional spray		
Mixing ratio (weight)	1 part liquid to 4.8 parts powder		
Pot life (hours)	°F/°C		
	90/32	70/21	50/10
	8	12	16

Environmental conditions		
Temperature	°F	°C
air	0 to 120	-18 to 49
surface	0 to 130	-18 to 54
Relative humidity	50-90%	

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

Drying time (ASTM D1640) @ 3 mils @ 50-90% RH

	°F/°C		
	90/32	70/21	50/10
touch (minutes)	5	15	30
through (minutes)	10	25	50
topcoat (hours)	16	24	24

Thinner	Amercoat 930, 936
Equipment cleaner	Thinner or Amercoat 12

Formerly Amercoat 3382

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. **A fine finish tip 0.016-to 0.022-inch or larger must be used.**

Conventional spray – Industrial equipment such as 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

Powder and liquid are packaged in the correct proportions which, when mixed together, yield 0.77 gallon or 4 gallons of Dimetcote 9HS.

***Caution** – Moisture or water contamination in Dimetcote 9HS Liquid will cause shorten pot life, skinning and gelling.*

1. Flush all equipment with thinner or Amercoat 12 cleaner to remove any moisture 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 prevent possible clogging of equipment.
5. Pot life is limited and shortened by high temperatures; do not mix more coating than will be used within the specified times.

***Important** – At the end of the pot life, "kick-out" or separation of liquid and solids occur, together with gassing. Do not keep mixed material which has exceeded 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 during use to prevent skinning or gelling due to moisture in air. Skim off skins and strain material through cheesecloth or 30 mesh screen to remove any remaining skin pieces. Discard gelled material.
7. Thin for workability or when a rough film or "dry spray" is obtained because of fast solvent evaporation during hot weather or high wind. Use 2 oz. of Amercoat 930 per gallon of mixed coating. For low temperatures (60°F) or below or when experiencing slow drying, use 2 oz. of Amercoat 936 per gallon mixed of coating.
8. Adjust spray equipment to apply an even wet coat with minimize over spray.
9. Continue very slow stirring during application to maintain uniformity of material. Avoid fast stirring as this may cause a rise in material temperature and moisture entrainment shortening pot life and causing gelling.
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.
12. When dry through, check film thickness with a nondestructive dry film thickness gauge. Recoat if greater thickness is required. Normal recommended thickness is 3-4 mils (75-100 microns). Total dry film thickness must not exceed 8 mils (200 microns). Greater thickness may develop cracking
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.

Note - Drying and topcoating times will be longer when film thickness is over 4 mils (100 microns), ventilation and air movement are restricted and temperatures or relative humidities are lower. A water mist sprayed over the coating when the film is dry to touch will accelerate harding hadening at lower humidities.

14. In confined areas, ventilate with clean air during application and drying until all solvents are removed. Temperature and relative humidity of the air must be such that moisture will not condense on the surface until after material is 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, Amercoat 9HS will harden and plug spray equipment.

Shipping Data

Packaging unit	.77-gal	4-gal
liquid	3.707 lbs in 1-gal can	19.2 lbs in 5-gal can
powder	17.76 lbs in 1-gal can	92.5 lbs in 5-gal can

Shipping weight (approx)	lb	kg
0.77-gal unit		
liquid	4.4	2
powder	18.5	8.4
4-gal unit		
liquid	22.3	10.1
powder	97.7	44.4

Shelf life when stored indoors at 40 to 100°F (4 to 38°C)

liquid	10 months from manufacture date**
powder	2 years from shipment date

***Note:** See manufacture date on container label. Improper storage can result in moisture contamination which will either shorten potlife or result in gelling before shelf life expires.*

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

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

Safety Precautions

Read product's material safety data sheet before 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. Ameron 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 Ameron 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 industrial use only. Not for residential use.

Warranty

Ameron warrants its products to be free from defects in material and workmanship. Ameron's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at Ameron's option, to either replacement of products not conforming to this Warranty or credit to Buyer's account in the invoiced amount of the nonconforming products. Any claim under this Warranty must be made by Buyer to Ameron in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer's failure to notify Ameron of such nonconformance as required herein shall bar Buyer from recovery under this Warranty.

Ameron makes no other warranties concerning the product. No other warranties, whether express, implied, or statutory, such as warranties of merchantability or gitness for a particular purpose, shall apply. In no event shall Ameron be liable for consequential or incidental damages.

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Limitation of Liability

Ameron's liability on any claim of any kind, including claims based upon Ameron's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim. **In no event shall Ameron be liable for consequential or incidental damages.**

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