

DSP 2

Advanced Pre-Construction Primer

Waterbased inorganic zinc

Patent No. 5,888,280

Product Data/ Application Instruction

- Inorganic zinc preconstruction primer
- Zero VOC content
- No lead pigments added
- Durable - less touch-up and repair
- Can be used with a wide range of topcoats
- 1/2 mil film thickness protects steel for extended periods
- Early water resistance

Typical Uses

As a preconstruction or shop primer, DSP 2 preconstruction primer protects steel shapes and plates, interior and exterior steel surfaces before and during construction of ships, barges, tank exteriors and other marine and industrial structures against water, weathering and abrasion.

Surface Preparation

Coating performance, in general, is proportional to the degree of surface preparation. Surface must be free of moisture, grease or other contaminants. Round off all rough welds and sharp edges, remove weld spatter.

Steel – uncoated, without pits or depressions, blast SSPC-SP 10. Previously painted or pitted, SSPC-SP 5.

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

Apply DSP 2 as soon as possible to avoid rusting or other recontamination. Do not leave blasted steel uncoated overnight. Spot blast to remove any contamination; solvent wiping is not satisfactory.

Application Equipment

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

Conventional spray – Industrial equipment such as DeVilbiss MBC 510 with a heavy mastic spring and leather packing. Use a Clemtex ZS-5110 sprayhead with a DeVilbiss 64 air cap to avoid sticking and packing of the fluid needle and tip. A pressure pot with a variable speed agitator, and oil and water trap and separate air and fluid regulators should be used.

Airless spray – Equipment such as a Speeflo 914-315 14:1, Alaskan PZ or Nordson Commander equipped with water-resistant seals and check valves should be used. A 30 mesh in-line filter with Speeflo's 801-385 H-Gun PZ is recommended. For best application results use a 0.017-inch spray tip with a 0.028-to 0.036-inch preorifice.

Power mixer – Jiffy Mixer

Physical Data

Finish	Flat	
Color	Gray	
Components	2	
Curing mechanism	Water evaporation and chemical reaction between components	
Volume solids	62%±3%	
Dry film thickness per coat	0.5 - 0.7 mils (12.5 - 17.5 microns)	
Coats	1	
Theoretical coverage	ft ² /gal	m ² /L
1 mil (25 microns)	994	24
0.7 mils (17.5 microns)	1420	35
VOC	0.0 lb/gal	0.0 g/L
Flash point (liquid)	N/A	
Temperature resistance-Dry	750°F (400°C)	

Application Data

Applied over	Steel
Surface preparation	SSPC-SP 5 or 10
Method	Airless or conventional spray
Mix ratio as packaged	15.8 lbs powder to 0.72 gal liquid
Pot life (hours) @ 90°F/32°C	8

Environmental conditions

	°F	°C
Temperature		
air	50 to 120	10 to 49
surface	50 to 130	10 to 54

Relative humidity 85% at 70°F

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

Drying time

(ASTM D1640) @ 50-70% RH

	°F/°C		
	90/32	70/21	50/10
touch (minutes)	1	2	10
through (minutes)	2	6	35
recoat (hours)	1	1 1/2	4
topcoat (hours)	12	24	48
Cleaner	Water		

Formerly Amercoat 3417

Application Procedure

1. Flush all equipment with fresh water before use.
2. Stir liquid with a power mixer.
3. Discard desiccant bag from powder and gradually stir powder into liquid. Continue stirring until powder is well dispersed and mixture free of lumps. Do not mix more material than will be used within 8 hours at 90°F. Do not reverse order nor vary proportions.
4. **Do not thin for any reason.**
5. Strain mixture through 30-60 mesh screen to prevent possible clogging of equipment.
6. Continue slow stirring during application to maintain material uniformity.
7. Apply a wet coat in even parallel passes, overlap each pass 50 percent to avoid pinholes, holidays or bare areas.
8. Insure proper thickness on welds, cutouts, sharp edges, rivets, bolts, etc. Avoid excessive thickness in corners as cracking may occur.
9. Keep pressure pot at approximately same elevation as spray gun for proper material delivery to gun.
10. When dry through, check film thickness with a non-destructive dry film thickness gauge. Recoat if greater thickness is required. Normal recommended dry film thickness is 0.5 and up to 0.7 mils (12.5 - 17.5 microns) without cracking.
11. Touch up random pinholes, holidays, small damaged or bare areas by brush when film is dry to touch. Larger areas should be sprayed.

Caution - In confined areas or under stagnant air conditions, glazing of the DSP 2 surface may occur. Surface must then be lightly blasted to roughen the surface before topcoating.

12. Ventilate with clean air during the application and curing following final coat. Ventilating air temperature and relative humidity between coats must be such that condensation will not form on the surface between coats.
13. Clean equipment immediately after use with fresh water.

Curing

1. Protect primer for 1 hour from condensation, or pooling or standing water.
2. Before handling, allow primer to dry 15 minutes. At high humidity and/or low temperature, drying time will be extended.
3. Touch-up may be done when first coat is dry to touch.

Topcoating

In general, DSP 2EW will require reduced secondary surface preparation prior to topcoating. As topcoat systems, end-use service conditions, and performance requirements will vary, contact your Ameron representative for specific recommendations.

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 prices 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.**

Shipping Data

Packaging	1 gal	5 gal
liquid	0.72 gal in 1-gal pail	3.6 gal in 5-gal pail
powder	15.8 lbs in 1-gal can	79.0 lbs in 5-gal pail
Shipping weight (approx)	1 gal	5 gal
liquid	8.0 lb/3.7 kg	40.3 lb/18.3 kg
powder	16.4 lb/7.5 kg	83 lb/37.7 kg
Shelf life when stored indoors at 40 to 100°F (4 to 38°C)		
liquid	6 months from shipment date	
powder	1 year from shipment date	

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

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

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.

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.

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