



Technical Data

PRODUCT DESCRIPTION

Two component, low VOC, self curing inorganic zinc primer that provides excellent corrosion resistance and adhesion to properly prepared ferrous metal substrates such as structural steel, piping, tank exteriors, offshore platforms, marine equipment, bridges, superstructures, decks, etc.

FEATURES AND BENEFITS

- Two component
- Low VOC
- Meets SSPC 20, Type 1-C Level II. Level I available on request.
- Ease of application
- Quick cure times for ease of handling and over-coating
- Excellent corrosion resistance
- Excellent abrasion resistance

PRODUCT DATA

Description	Results
Vehicle Type	Inorganic Silicate
Color	Gray/Green
Gloss	Flat
% Zinc (by weight) in dry film (mixed w/33905)	84%
VOC (mixed w/33905)	<2.8 lbs/gal
Weight/Gallon (mixed w/33905)	24.8 lbs/gal
Solids by Weight (mixed w/33905)	88%
Solids by Volume (mixed w/33905)	61% (Theoretical)
Flash Point (white)	110°F
Dry Heat Resistance	750°F
Freight Classification	See MSDS

APPLICATION DATA

Description	Results
Application	Conventional and Airless Spray
Mix Ratio	As Packaged
Liquid	33904
Powder	33905 (14.6#)
Recommended Thickness	2.0 - 3.0 mils DFT
Dry Time @ 77°F, 50% RH	
No Accelerator	Spray
Tack Free	1/2 hour
Handle	16 hours
Recoat	16 hours
Pot Life @75°F, 50% RH	Use within 8 hours
Coverage (mixed w/33905)	385 sf/gal at 2.5 mils DFT
Thinner	
VOC Exempt	21113
Non VOC Exempt	20653, 20695
Clean Up	21092

CHEM-IOZ 2.8 INORGANIC ZINC surface must be clean and dry before top coating. Water soluble contaminants may be

washed off with water. Remove grease and similar contaminants with an EPA approved, 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.

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 0.013-to 0.017-inch or larger is recommended.

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.

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 CHEM-IOZ 2.8 INORGANIC ZINC 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-SP10. Previously painted or pitted steel uncoated, without pits or depressions, SSPC-SP10. Remove all traces of previous organic coatings as CHEM-IOZ 2.8 INORGANIC ZINC 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 an EPA approved, neutral detergent or emulsion cleaner and roughen surface by light abrasive blast SSPC-SP-7.

APPLICATION PROCEDURE

Do not apply if relative humidity is greater than 85% or temperature is within 5 degrees of dew point. Do not apply if relative humidity is under 50% relative humidity unless provisions can be made to post-cure by water misting.

Powder and liquid are packaged in the correct proportions

which, when mixed together, yield $\frac{1}{2}$ (33905) gallon of CHEM-IOZ 2.8 INORGANIC ZINC.

Caution – Moisture or water contamination in CHEM-IOZ 2.8 INORGANIC ZINC Liquid will cause a shortening of pot life, skinning and gelling.

1. Flush all equipment with thinner 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. If using airless pumps, change out buckets, pails, etc. during spraying applications since caking of the product on sides of buckets may accumulate during long application processes.
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 recommended thinner per gallon of mixed coating. If needed, use more thinner in 2 oz. increments until good spray ability and film build is achieved.
8. Adjust spray equipment to apply an even wet coat in order to 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. During airless applications an explosion proof, handheld mixer should be used to keep the product suspended.
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 2.0-3.0 mils (50-75 microns). Total dry film thickness must not exceed 5.0 mils (125 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 over-coating times will be longer when film thickness is over 4 mils (100 microns), ventilation and air movement are restricted and temperatures or relative humidity is lower. A water mist sprayed over the coating when the film is dry to touch will accelerate hardening at lower humidity (< 50% relative humidity).
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 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, CHEM-IOZ 2.8 INORGANIC ZINC will harden and plug spray equipment.

SHIPPING WEIGHTS

33904-001: 6.67#
33904-005: 32.4#
33905-001: 15.6#
33905-003: 77.0#

HEALTH AND SAFETY

Read the Material Safety Data Sheet (MSDS) and container labels for detailed health and safety information. This product is intended for industrial use by properly trained professional applicators only.

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2728 Empire Central - Dallas, TX 75235 - Telephone (214) 353-1600 - Fax (214) 350-7624 - www.jones-blair.com