

## VSC™ 1100 PRIMER

### VSC™ 1100 PRIMER (Parts A & B)

VSC 1100 Primer is a two part (4:1) solvent based high performance epoxy primer that is extremely hard, tough and durable. It can be used in both interior and exterior applications over steel, concrete, galvanized and aluminum. VSC 1100 Primer was developed in conjunction with VSC 1200 Topcoat to provide a step change in corrosion resistance and long term protection of assets in high wear and harsh environments.



### PHYSICAL PROPERTIES (Mixed)

COLOR	Aluminum
TACK FREE TIME	3-4 hours
%SOLIDS BY WEIGHT	84
%SOLIDS BY VOLUME	73
COVERAGE (Theoretical)	195 sq. ft./gal @6 mils DFT, assumes no Loss
RECOMMENDED THICKNESS	5-7 mils dry (7-9 mils wet)
VISCOSITY	90-95 Ku
WORKABLE POT LIFE	4 hours at 77°F
SAG RESISTANCE	12+ mils
RECOAT TIME	1 hour - 28 days
COATING VOC	2.0# per gl. (240 gms./l.)
FLASHPOINT	113°F
FLAMMABILITY CLASS	Combustible II

### Advantages:

- Hard, tough and durable
- Exceptional corrosion resistance
- Exceptional adhesion
- Low temperature cure
- Surface tolerant

### PRODUCT DESCRIPTION:

Premium performance high solids low VOC two component aluminum epoxy primer for use under epoxy and polyurethane topcoats. VSC 1200 Urethane Topcoat is recommended for enhanced performance.

### RECOMMENDED USES:

For use as a spot or overall primer on steel, galvanized, aluminum, and poured concrete walls and flooring. Can be used over most previously primed and top coated substrates, as well as over tightly adhered rust, with minimal preparation.

Application over aged silicone alkyd systems is not recommended without total removal down to white metal.

Recommended for use on interior & exterior structural steel, steel piping, storage tank exteriors, bridges, metal buildings, railings, conveyors, pumps, motors and other machinery.

Excellent performance in medium to heavy duty protective maintenance applications for most industrial and commercial environments.

VSC 1100 can be applied over cured inorganic zinc and zinc rich primers as an intermediate coat.

### PERFORMANCE DATA

Corrosion ASTM B117 Salt Fog Blasted steel

Film Build VSC1100	ASTM B117 rating	With VSC1200topcoat (5 mil dry)
3.5-5 mil dry	Greater than 1400 hrs. no face blister, no face rust, less than 2mm scribe rust	Greater than 3000 hr. no face blister, no face rust, less than 3 mm scribe rust

Chemical resistance VSC 1100/1200 at target film build, 7 day ambient cure, 7 day direct contact exposure

Material	Rating
Acid (sulfuric)	Excellent – no damage
Base (sodium hydroxide)	Excellent – no damage
Solvents	Good
Brake Fluid	Good (some softening)
Hydraulic Fluid	Excellent
Water*	Excellent
Salt water*	Excellent

\*Not recommended for immersion

Weathering: VSC 1100/1200 at target film build, 7 day ambient cure 60 degree gloss retention

Method	Rating
Xenon ASTM 7869	4000 hrs. > 70% gloss retention
ASTM G154 cycle 1 (QUVA)	6000 hrs. > 70% gloss retention

Adhesion VSC 1100/1200 at target film build, 7 day ambient cure

Method	Rating
Condensing Humidity ASTM D2247 at 600C 7days blasted steel	Excellent
Field exposed Blasted steel	Excellent
Field exposed moderately prepared surface (Power wash/scrap over old paint)	Excellent

## DIRECTIONS FOR USE

**Recommended Topcoat: VSC 1200 Urethane polyester high solids low VOC topcoat.**

### SURFACE PREPARATION:

Surfaces must be clean, dry, free from oil, grease, hydraulic fluids, silicone contamination, waxes, or any other residue. Use a solvent or commercial cleaner that does not leave a residue per SSPC-SP 1. Remove all mill scale, non-tightly adhered rust and any loose paint.

Ensure that previously painted surfaces have adequate adhesion, if not remove the old coating. Smooth, slick surfaces should also be abraded to ensure adequate adhesion.

For environments which do not permit abrasive blasting, or over previously painted surfaces, hand tool cleaning per SSPC-SP2, power tool cleaning per SSPC-SP3, and/or high pressure water cleaning per SSPC-SP 12/NACE 5 WJ-4 is recommended.

**New Steel & Iron:** Abrasive blasting is preferred for enhanced performance. Blast to a Commercial finish per SSPC-SP 6/NACE 3 to obtain a 1.5-3 mil profile. Prime overall with ZincGard 1000 inorganic zinc primer, followed by VSC 1100 aluminum epoxy as an intermediate coat. Apply a mist coat of VSC 1100 (approximately 4 wet mils) which seals the porous inorganic zinc surface. Thinning may be required with VSC 8100 Thinner. This is followed by a second light mist coat, to achieve final film thickness of 5-7 mils dry.

VSC 1100 can also be applied directly over ZincGard 1500 zinc rich primer, in accordance with SSPC Guide 12.0 for top coating zinc rich primers.

**Galvanized Steel and Aluminum:** Remove all surface contamination with solvent or commercial cleaner that does not leave a residue per SSPC-SP 1.

New galvanized should be sweep blasted or etched with a phosphoric acid solution, or coated with 0.5 dry mils of a phosphoric acid pre-treatment, followed by VSC 1100 aluminum epoxy primer. Old galvanized should be cleaned per SSPC-SP1, and lightly abraded per SSPC-SP 2 or SSPC-SP3, and primed with VSC 1100 aluminum epoxy.

**Concrete:** For new concrete, minimum cure is 28 days at 75°F and 50% RH or the equivalent. Abrasive blast or acid etch slick or glazed concrete, and remove laitance and form oils. Produce medium surface roughness per SSPC-SP13/NACE 6. Surface should be sealed with VSC 1100 aluminum epoxy.

For previously painted concrete, clean surface and remove all loose paint and debris with hand or power tools, and high pressure water cleaning. Spot prime bare concrete or seal overall as necessary with VSC 1100 aluminum epoxy.

### APPLICATION:

**MIXING:** 4 parts VSC 1100 Primer Part A

1 part VSC 1100 Primer Part B

- Material is supplied in two containers as a unit, always mix a complete unit in the proportions supplied. Once the unit has been mixed, it must be used within the working pot life specified.
- Mix Part A thoroughly with low speed power agitation
- Then combine components, blend 1 Part B into 4 Parts A and thoroughly agitate the mixture with low speed power agitation.
- There is no induction period required, material is ready to use
- Do not apply material beyond the recommended pot life
- Do not mix previously catalyzed material with fresh material
- DO NOT MIX PARTIAL KITS - ONLY USE ONE & FIVE GALLON KITS AS SUPPLIED

**NOTE:** This primer contains finely dispersed aluminum flakes. It is normal, even after proper mixing, that ultra fine particles may float in the can, and occasionally on the coated part. This does not affect product quality or performance.

**METHOD OF APPLICATION:** Air, Airless or Air Assisted Airless Spray, Brush or Roller

**Brush or Roller:** No thinner is necessary throughout the workable pot life window. Use a natural bristle brush or medium nap roller with solvent resistant fibers & core. Work primer into all gaps & crevices. Apply wet and avoid excessive brushing or re-rolling.

**Airless or Air Assisted Airless:** Primer can be sprayed as mixed. Thinning may be required for temperatures below 70°F or to adjust to specific application equipment. If thinning is necessary, use only VSC 8100 Thinner up to 5% by volume maximum. An airless pump equivalent to Graco Bulldog 30:1 ratio at 1900-2100 psi is recommended, with a 60 mesh in line filter. Use .013" to .0315" spray tip. Good results have also been achieved with a Graco Bulldog 60:1 pump at 45 psi, using a 517-519 tip. A Graco air assisted 30:1 pump or equivalent at 2100 psi, and 65 psi atomizing pressure is recommended, using a 311 reversible tip.

**Optimum results have been achieved using a .019" tip at 3200 psi with a 3/8" ID hose and no thinning; or .017" tip at 2800 psi with a 3/8" ID hose and 2-3% reduction with VSC8100 Thinner.**

**Conventional Air:** Thinning may be required for proper atomization. If necessary, use only VSC 8100 Thinner up to 5% by volume maximum. Industrial sprayers such as DeVilbiss MBC or JGA and Binks 18 or 62, fitted with a double regulated pressure pot, 3/8" ID minimum material hose and a .070" - .086" ID fluid tip and matching air cap, are recommended.

**CLEANUP & PROLONGED WORK STOPPAGES:** Do not allow material to remain in hoses at the end of a job, or during prolonged work stoppages.

Thoroughly flush & clean all equipment immediately after use with Acetone or MEK. Any mixed primer should not be re-used after its workable pot life.

All excess material and empty containers should be disposed of in accordance with appropriate local, state and federal regulations.

**SHELF LIFE:** 2 years from date of manufacture unopened at 77°F

**CAUTION:** For industrial use only. Read and follow all caution statements on this product data sheet, and on the Material Safety Data sheet for VSC 1100 Aluminum Epoxy Primer.

**HEALTH & SAFETY:** This is a Combustible II material. Use explosion proof and local exhaust ventilation. Good general ventilation (typically 10 air exchanges per hour) should be used. In confined spaces (or when spraying) use a chemical respirator with organic vapor cartridge and full facepiece.

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