PERMA-CRETE®

4-5110 - White/Pastel
4-5130 - Deep Base
4-5140 - Ultra Deep Base

Architectural Coatings

PERMA-CRETE® Vertical Concrete Stain VCS

GENERAL DESCRIPTION

PERMA-CRETE® Vertical Concrete Stain VCS is an opaque water repellent designed primarily for spray application to exterior, above grade, pre-cast and tilt-up masonry substrates. It is alkali and efflorescence resistant and can be applied to a substrate with a pH of 6 to 13. PERMA-CRETE VCS provides resistance against water, UV light, staining, is breathable, and is a quick drying product which allows for a second coat application, typically in fifteen minutes. PERMA-CRETE VCS will not peel, crack or blister from a properly prepared masonry or previously painted substrate. PERMA-CRETE VCS is ideal for use on the walls and support structures of commercial buildings, concrete highway barriers, and bridge abutments. PERMA-CRETE VCS is not designed to waterproof concrete block or other porous substrates.

RECOMMENDED SUBSTRATES

Brick	Cinder Block	Stucco
Concrete	Fiber Cement Siding	Tilt Up
Concrete Block (CMU)	Masonry Surfaces	

APPLICATION INFORMATION

Stir or shake thoroughly before use. Apply two coats. Read all label and Material Safety Data Sheet (MSDS) information prior to use. MSDS are available through our web site or by calling 1-800-441-9695

Application Equipment: Apply by airless spray, backroll as needed.

Airless Spray: Minimum requirements: Pressure 1800 - 2400 psi, tip 0.015" - 0.021", flow rate 1 gal/minute.

Spray equipment must be handled with due care and in accordance with manufacturer's recommendations. High pressure injection of coatings into the skin by airless equipment may cause serious injury.

Brush: Polyester/Nylon Brush, for small areas
Roller: 3/8" - 3/4" synthetic roller cover
Thinning: Not recommended.

APPLICATION INFORMATION (continued)

Permissible temperatures during application:

Material:	35 to 100ºF	2 to 38ºC
Ambient:	35 to 100ºF	2 to 38ºC
Substrate:	35 to 100ºF	2 to 38ºC

PRODUCT DATA

PRODUCT TYPE: 100% Acrylic
BASE/COLOR: 4-5110 White & Pastel Base
4-5130 Deep Base
4-5140 Ultra Deep Base
SHEEN: Flat 0 to 5 (85º Gloss Meter)
CLEAN UP: Soap and Water
VOLUME SOLIDS*: 39% +/- 2%
WEIGHT SOLIDS*: 53% +/- 2%
VISCOSITY*: 93 to 103 KU
VOC*: 0.71 lbs./gal. (85 g/L)
COVERAGE*: 50 to 225 sq. ft./gal.
(7 to 20.9 sq. m/3.78L)

Dependent on surface texture and porosity. Calculate coverage for 2 coat application. First coat will penetrate and seal; second coat provides uniform appearance. Typical coverages are:

Smooth (pre-cast)	100 to 225 sq. ft./gal.
Tilt Up	100 to 200 sq. ft./gal.
Stucco	50 to 150 sq. ft./gal.
Fiber Cement	100 to 225 sq. ft./gal.
Porous/Concrete Block	50 to 200 sq. ft./gal.

WEIGHT/GALLON*: 10.9 lbs. (4.9 kg) +/- 0.2 lbs. (91 g)

DRYING TIME: Dry time @70ºF (21ºC); 50% relative humidity

To Touch:	15 minutes
To Handle:	15 minutes
To Recoat:	15 minutes
To Full Cure:	15 minutes

Drying times listed may vary depending on temperature, humidity and air movement.

FLASH POINT: Over 200ºF (93ºC)
*Product data calculated on product 4-5110

FEATURES AND BENEFITS

Features	Benefits
Quick Drying Time	Turns jobs faster
Alkali / Efflorescence Resistance	Applies to fresh concrete at 7 days and/or less than 13pH. Blocks salt deposits
Protects Against Environmental Contamination	Resists salt spray & dirt
Application to 35°F (2ºC)	Extends painting season
Water Vapor Permeance	Breathability
Excellent Application Properties	Reduces application time and provides a natural uniform appearance
Mildew Resistance	Resists Mildew/Fungus/Biological growth
UV Resistance	Looks like new longer
Water repellent	Reduces water penetration
VOC Compliant	Lower than current Federal AIM Regulations

PERFORMANCE DATA

Property	Test Method	Results
Adhesion	ASTM D3359	Pass
Alkali/Efflorescence Resistance	TT-P-1511B	Passes: no efflorescence, blistering, saponification
Permeability	ASTM D1653	Greater than 15 perms
Salt Spray	ASTM B117	Pass @ 500 hours / No yellowing
Weathering	ASTM D822	Pass @ 3,000 hours / No change in performance and appearance

GENERAL SURFACE PREPARATION

Surfaces to be coated must be clean and free of all contamination including loose and peeling paint, dirt, grease, mildew, rust, product fines and dust. Remove loose paint, excessive chalk, and efflorescence by wire brushing, scraping, sanding or pressure washing. Caulk all cracks and open seams. Clean surfaces per ASTM Standard Practice D4258-83: Standard Practice for Surface Cleaning Concrete for Coating. Vacuum cleaning, water cleaning, detergent water wash, power wash cleaning, steam cleaning, hand tool and mechanical cleaning are acceptable cleaning methods. Remove efflorescence by pressure washing or cleaning with dilute muriatic acid (following manufacturer's instruction). Remove mildew by washing with PPG MILDEW CHECK® Multi-Purpose Wash 18-1, or 1 part chlorine bleach to 3 parts water. Before use, be sure to read and follow instructions and warnings on label. Dry substrate thoroughly to a moisture content under 12% (ASTM D4263: Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method). Clean chalky paint in good condition by sweep blasting, power washing, wire brushing, etc. to remove loose material. After cleaning, powdery or chalky, unpainted recommended substrates may be conditioned with a coat of PERMA-CRETE Exterior Acrylic Clear Masonry Surface Sealer 4-808 or Pigmented Masonry Surface Sealer 4-809.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust or fumes. LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a properly fitted NIOSH-approved respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead. In Canada contact a regional Health Canada office. Follow these instructions to control exposure other hazardous substances that may be released during surface preparation.

LIMITATIONS OF USE

Do not apply in direct sunlight or when air or substrate temperature is below 35°F (2ºC) or above 100° (38ºC)F. Do not apply in late afternoon if condensation or fog is likely to occur, nor when rain is anticipated within 12 hours. Substrate temperatures must be at least 5°F (3ºC) above dew point. For optimum application properties, bring material to at least 50°F (10°C) prior to application. Always backroll the surface when applied by spray application. Extremely porous substrates may require 3 coats to achieve desired uniformity. Do not use on horizontal surfaces. PERMA-CRETE VCS is not designed to waterproof concrete block or other porous surfaces. PROTECT FROM FREEZING.

While this product provides a mildew resistant coating, growth may still occur if the substrate is not properly prepared prior to painting and/or if the substrate is consistently exposed to conditions conducive to mold, mildew, and algae. Examples of these conditions include, but are not limited to, under eaves, behind shrubbery and trees, and in areas that are consistently damp with little to no direct sunlight. USE WITH ADEQUATE VENTILATION. KEEP OUT OF REACH OF CHILDREN.

PACKAGING

5-Gallon (18.3 L)	White & Pastel Base
5-Gallon (17.3 L)	Deep Base
5-Gallon (17.1 L)	Ultra Deep Base

RECOMMENDED PRIMERS

None

TINTING AND BASE INFORMATION

Refer to the appropriate PPG color formula book for tinting instructions.

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Deep Base

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PPGAF believes the technical data presented is currently accurate: however, no guarantee of accuracy, comprehensiveness, or performance is given or implied. Improvements in coatings technology may cause future technical data to vary from what is in this bulletin. For complete, up-to-date technical information, visit our web site or call 1-800-441-9695.

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