



*Stars Management DMCC*

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**SUBMITTAL**

**POLASEAL VCI**  
(Corrosion Inhibiting Concrete Sealer)

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# POLASEAL VCI™



## Corrosion Inhibiting Concrete Sealer

### DESCRIPTION

POLASEAL VCI is a corrosion inhibiting, penetrant sealer for the protection and waterproofing of most types of concrete. POLASEAL VCI uses a combination of vapor corrosion inhibition chemistry and reactive siloxane technology to provide corrosion protection to steel reinforcement and waterproofing protection of concrete. POLASEAL VCI contains microparticulate inhibitors that penetrate into the concrete structure. These inhibitors produce a monomolecular layer that seeks the metal surface of rebar and inhibits ion transfer (corrosion). This corrosion protection is continually replenished by additional unreacted inhibitor. Dilution of the monomolecular layer is prevented by a siloxane surface barrier.

### OUTSTANDING FEATURES

- Arrests concrete deterioration caused by water penetration and internal corrosion
- Prevents corrosion of rebar and maintains structural integrity of the concrete
- Provides long term protection and waterproofing for most types of concrete
- Does not alter the concrete's appearance and prevents further rust staining and efflorescence
- UV stable and resists mildew and microbiological deterioration

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- Low odor during application; non-toxic and V.O.C. compliant
- Protects against acid rain, efflorescence, freeze-thaw spalling, and rust breakout
- Reduces staining, chloride ion ingress, A.S.R., and revisionary ettringite

### APPLICATION

POLASEAL VCI is designed for application to untreated concrete surfaces. Any coatings that impede penetration of the sealer into the surface will need to be removed. Hard, impenetrable coatings such as epoxy or polyurethane will need to be sand blasted or wet abrasive blasted. Weathered, peeling paints may be sufficiently removed by high pressure water jetting. All

oils, treatments and contaminants that could restrict or prevent penetration of the sealer must be thoroughly removed. All repairs to the concrete should be completed prior to the application of the POLASEAL VCI. Cleaning to remove rust stains, efflorescence, mildew, etc., should be completed prior to application of POLASEAL VCI. All restoration work should be completed so that the surface that is to be protected will appear unchanged by the treatment with POLASEAL VCI. A dry surface is preferred to allow maximum penetration of sealer into the concrete. Apply POLASEAL VCI by low pressure spray, maintaining sufficient volume for saturation to the point of rundown or surface collection. Single coat coverage should be sufficient to provide complete protection; however, uneven surfaces, projections and shadows

SPECIFICATIONS	
Sealer Type	VCI Modified Siloxane
VOC	Below 25 gms/liter
Shelf Life	24 months
Average Penetration	6 inches
Coverage	150 square feet per gallon, depending upon substrate
Packaging	1 gallon, 5 gallons, and 55 gallons
Color	Clear

# POLASEAL VCI<sup>TM</sup>

## Corrosion Inhibiting Concrete Sealer



may cause areas to be missed. For this reason, a light second coat may be necessary to find and treat any of these hidden areas.

### LIMITATIONS

Store product between 38°F and 95°F. Do not apply to frozen or saturated surfaces. Do not apply if precipitation is forecast within 8 hours. Do not spray in strong wind conditions. Protect adjacent surfaces, including shrubbery, from overspray. Overspray may damage

raw copper or aluminum surfaces. Remove any overspray from glass, metal or vinyl surfaces within 4 hours by wiping with thinner or mineral spirits, followed by wiping with glass cleaner. Clean tools immediately after use with water and detergent.

### MAINTENANCE

If a treated surface becomes dirty, low pressure wash with water or a soapy water solution. Rinse with clear water spray.

### PRECAUTIONS

Do not ingest. In case of ingestion, seek immediate medical assistance. Avoid contact with skin and eyes. In case of contact, flush with clear water for 15 minutes. For contact with eyes, get medical attention in addition to flushing. Wear rubber gloves, safety goggles and coveralls when using this product. Intended for outdoor use only.

Keep away from children and pets.

TECHNICAL DATA	
Flashpoint	Non flammable
Solids Content	15% (B.W.); 15% (B.V.)
Density	8.6 lb/gallon
Actives	12.5% by weight
Chemistry	Corrosion inhibitor modified siloxane
Weatherometer	Pass ASTM G-23
Water Permeance	Pass ASTM E514-74
Salt Spray (300 hours)	Pass ASTM B-117
Water Absorption	Pass Federal Spec SS-W-110C (below 1.0%)
Reduction in Water Absorption	86.75% NCHRP 244 Series 11
Corrosion Project #01-111-1425	336 hrs half immersion - no visible corrosion
Corrosion Project #01-111-1425	336 hrs full immersion - no visible corrosion

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Effective Date: 09/2010

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MATERIAL SAFETY DATA SHEET  
U.S. Department of Labor  
Occupational Safety & Health Administration

**POLASEAL VCI**

**SECTION 1 - IDENTIFIERS**

MANUFACTURER: Andek Corporation  
TRADE NAME: Polaseal VCI  
CHEMICAL FAMILY: Siloxane Emulsion

**SECTION 2 – HAZARD IDENTIFICATION & EMERGENCY OVERVIEW**

Emergency Overview: Not considered to be hazardous. Some individuals may find the odor to be unpleasant.

Effects of Overexposure:

SKIN: No skin irritation is expected.  
EYES: Mildly irritating to the eyes.  
BREATHING: Mists may cause mild irritation to the upper respiratory tract.  
SWALLOWING: None known.

**SECTION 3 - COMPOSITION**

<u>COMPONENT</u>	<u>CAS #</u>	<u>APPROX %</u>	<u>TLV</u>
PolyDimethylsiloxane w/Amino Functional Groups	9043-30-5	10.0	
Fungicide	1897-45-6	0.3	
Cortec MCI	Trade secret	2.5	
Water	7732-18-5	Balance	

**SECTION 4 – FIRST AID MEASURES**

SKIN: Wash contaminated areas with soap and water.  
EYES: Immediately flush with clear water for 15 minutes and seek additional medical treatment.  
BREATHING: Move victim to fresh air and apply first aid treatment as necessary.  
SWALLOWING: Do NOT induce vomiting. Dilute contents of stomach with 3-4 glasses of milk or water. Contact a physician.

**SECTION 5 – FIRE & EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED): >200° F (Seta).  
FLAMMABLE LIMITS: N/A  
EXTINGUISHING MEDIA: Dry chemical; carbon dioxide; foam; water.  
SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should wear positive pressure self-contained breathing apparatus.  
UNUSUAL FIRE & EXPLOSION HAZARDS: None.  
DECOMPOSITION PRODUCTS: Thermal decomposition yields oxides of C, N, Si, K, and Na.

**SECTION 6 – SPILL OR LEAK PROCEDURES**

Ventilate area, absorb with absorbent material and place in proper waste disposal containers.

**SECTION 7 – HANDLING & STORAGE**

Keep container closed when not in use. Protect from freezing.

**SECTION 8 – PERSONAL PROTECTION/EXPOSURE CONTROLS**

RESPIRATORY PROTECTION (SPECIFY TYPE): Insure adequate ventilation.  
EYE PROTECTION: Splash-proof chemical goggles.  
SKIN PROTECTION: Rubber gloves.  
OTHER PROTECTIVE EQUIPMENT: Coveralls.  
PERSONAL HYGIENE: Wash thoroughly after using this product.

**SECTION 9 - PHYSICAL DATA**

BOILING POINT (F)	212°	SPECIFIC GRAVITY (H <sub>2</sub> O=1)	0.98
VAPOR PRESSURE	20	PERCENT, VOLATILE BY VOLUME	90
VAPOR DENSITY (AIR=1)	1	EVAPORATION RATE (N.B.A.=1)	1
SOLUBILITY IN WATER	Reducible	pH	Approx. 8.0

APPEARANCE & ODOR: Clear liquid with a mildly ammoniacal odor.

**SECTION 10 - REACTIVITY DATA**

STABILITY: Stable.  
INCOMPATIBILITY (MATERIALS TO AVOID): Strong acids.  
HAZARDOUS POLYMERIZATION: Will not occur.  
CONDITIONS TO AVOID: Freezing.

**SECTION 11 TOXICOLOGICAL INFORMATION**

ACUTE ORAL TOXICITY	SLIGHT
ACUTE INHALATION TOXICITY	SLIGHT
ACUTE DERMAL TOXICITY	SLIGHT
SENSITIZATION	NON SENSITIZING
MUTAGENICTY	NOT LISTED
CARCINOGENICITY	NOT LISTED

**SECTION 12 ECOLOGICAL INFORMATION**

BIODEGRADATION	PARTIAL
TOXICITY TO FISH	MODERATE
TOXICITY TO AQUATIC INVERTEBRATES	MODERATE
TOXICITY TO MICRO ORGANISMS	MODERATE
ATMOSPHERIC OXIDATION OF VOLATILES	DEGRADES SLOWLY
BIOACCUMULATION	NOT EXPECTED
TOXICITY TO PLANTS	MODERATE

**SECTION 13 – DISPOSAL CONSIDERATIONS**

Dispose of in accordance with local, state and federal regulations.

**SECTION 14 - TRANSPORT INFORMATION**

PROPER SHIPPING NAME: Waterproofing compound  
HAZARD CLASS: None  
PACKING GROUP: N/A  
ID #: N/A  
RQ: N/A  
TRANSPORT LABELS REQUIRED: This material is not regulated by the D.O.T.

**SECTION 15 – REGULATORY INFORMATION**

See reference data for individual components.

**SECTION 16 – OTHER INFORMATION (HMIS RATING)**

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	B







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## PROJECT REFERENCES

	PROJECT	LOCATION	ANDEK PRODUCT USED
	U.S. Naval Research Lab	Washington DC	Polaroof NW
	Reagan National Control Tower	Reagan National Airport, Washington, DC	Polaroof AC, Wearcoat 66
	Arch Street Presbyterian Church	Philadelphia, PA	Polaprime 21, Polaroof AC
	Trump Building Wall Street (Metal roof)	New York, NY	Polaprime 21, Polaroof AC
	PA DOT-Interstate 476	Pennsylvania	Polagard AG
	McDonnell Douglas (Boeing Aerospace)	New Jersey	Polaroof RAC



John F Kennedy Airport

New York, NY

Polaroof SP, Flashband



LaGuardia Airport

New York, NY

Polaroof SP, Flashband



Throgs Neck Bridge

New York, NY

Roofdx Super, Roofab



Los Angeles Int'l Airport

Los Angeles, CA

Polaroof RAC, Roofab, Polaroof SP



PSE&G Nuclear Power Station

Salem, NJ

Andek 950, Wearcoat 66



Philadelphia Park Horse Stables

Philadelphia, PA

Polaprime 21, Polaroof AC



U.S. Air Force Airlift Command

Dover AFB, DE

Polaroof AC



U.S. Navy (Military Sealift  
Command)

Norfolk, VA

Polaroof SP



Walt Disney World

Orlando, FL

Roofdx Super, Polarof RAC, Roofab, Polarof AC, Polarof NW, Clearcoat 44



The Moshulu

Philadelphia, PA

Polaprime 21, Roofab, Polarof RAC



Interstate 78

Pennsylvania

Polagard AG



Veteran's Administration Hospitals

Delaware & Palo Alto, CA

Polarof RAC, Polarof SP



Jazzland Amusement Park

New Orleans, LA

Polagard AG



NASA Goddard Space Flight Center

Greenbelt, MD

Polarof RAC, Roofab



National Institutes of Health

Bethesda, MD

Cocoon 560, Cocoon Vinyl Bond B





Harrah's Casino

Atlantic City, NJ

Polaroof AC, Roofdx Copper



General Electric

Burkeville, AL

Cocoon 560, Cocoon Vinyl Bond B



Baltimore/Washington Int'l Airport

BWI Airport, MD

Polaroof NW



U.S. Department of State

Overseas Embassies

Rubberkote 1047



Princeton University

Princeton, NJ

Polaroof AC, Polaroof NW,  
Wearcoat 44, Roofab



U.S. Army Corps of Engineers

Hungry Horse, MT &  
Johnson Atoll

Polajoint



Dupont Corp

Richmond, VA

Polafloor PUR, Wearcoat 44,  
Polafloor Epoxy Topping



Lucy the Elephant

Margate, NJ

Polaroof AC, Polaprime 21



Maryland DOT

Chesapeake House  
Service Center

Polaroof AC, AIM #3



Philadelphia City Hall

Philadelphia, PA

Roofdx Super



Pfizer Pharmaceutical

Philadelphia, PA

Polafloor PUR



Philadelphia Naval Shipyard

Philadelphia, PA

Polaroof AC, Polaroof NW,  
Wearcoat 44, Roofab



University of Texas

Austin, TX

Clearcoat 44



Delaware DOT

Harrington, DE

Polaroof NW



The Ritz Carlton Resort & Golf  
Club

Bradenton, FL

Andek Firegard



Pennsylvania State University  
Wiley Lab

State Park, PA

Cocoon 560, Cocoon Vinyl Bond B



Hershey Park

Hershey, PA

Polafloor Colorcoat



National Italian Foundation HQ

Washington D.C.

Polagard Fibrelastic



Independence Blue Cross/Blue Shield HQ

Philadelphia, PA

Roofdx Super, Polafloor PUR



U.S. Navy - Military Sealift Command

Norfolk, VA

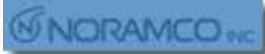
Polaroof SP

**Picatinny**

U.S. Army

Picatinny Arsenal, NJ

Polajoint Super



Noramco Pharmaceuticals

Wilmington, DE

Polaprime 21, Polaroof NW, Clearcoat 44



U.S. Coast Guard

Cape May, NJ

Polaroof SP, Polaroof RAC, Roofab



Bank of America

Baltimore, MD

Polaprime 21, Roofdx Super, Polaroof RAC, Roofab



Blue Cross/ Blue Shield

Columbia, SC

Polagard AG



Osiris Therapeutics

Columbia, MD

Cocoon 560, Cocoon Vinyl Bond B



Delaware "Smoke House" Fire  
Training Facility

Polaprime 21, Wearcoat 44



Kentucky Horse Park-Central  
Show Arena Facility

Lexington, KY

Polaprime 21, Polarof NW



Triborough Bridge & Tunnel  
Authority

New York, NY

Roofdx Super, Roofab, Silver Film



Druid Hill Recreation Center

Baltimore, MD

Wearcoat 44