

TECHNICAL DATA

Product Description

Cerami-Tar is a ceramic fortified, two component, high solids, chemically cured, coal tar modified epoxy. Cerami-Tar is a unique and outstanding barrier coating formulated for the express purpose of protecting steel and concrete exposed to aggressive chemical environments. Cerami-Tar has an extensive history of proven performance protecting steel and concrete subject to sanitary sewage and other aggressive chemical agents. Please contact Diamond Vogel Technical Service for detailed information on immersion application.

Intended Uses

Apply to:

- Interior or exterior surfaces
- Concrete
- Ductile iron
- Steel with impressed current
- Ferrous metal
- Piping transition zones
- Steel with sacrificial anode

Protects:

- Tanks
- Waste water treatment
- Structural or support steel
- Chemically contaminated water
- Water treatment applications
- Fresh water immersion
- Salt water immersion

The above are general recommendations and not intended to limit the use of Cerami-Tar. Test areas are always recommended to confirm results.

Physical Properties

Resin Type	Ceramic Modified Epoxy		
Finish/Sheen	Matte		
Colors	Black LF-9290		
Cure (Part B)	LM-0290		
Solids by Weight	73%		
Solids by Volume	70%		
Theoretical Coverage*	1,200 ft ² /gal @ 1 mil		
Dry Film Thickness / Coat	7.0–20.0 mils (175–500 microns)		
Wet Film to Achieve DFT	9.0–27.0 mils (225–675 microns)		
Coverage at DFT*	60–171 ft ² /gal		
VOCs	2.3 lbs./gal (265 grams/liter) activated		
Reduction Solvents	Diamond Vogel N-3023 Xylol (up to ½ pint per gallon) Maximum VOC Does Not Exceed 2.75 lbs./gal (319 g/L) activated and reduced		
Clean-up Solvents	Diamond Vogel N-3023 Xylol		
Induction Time	15 minutes		
Mixing Ratio (by volume)	9 part resin to 1 part cure. Product packaged in premeasured kits.		
Pot Life**	8 hours at 80°F (26.6°C) and 50% Relative Humidity		
Drying Time***		At 80°F (26.6°C)	At 50°F (10°C)
ASTM D1640-83 reapproved 1989	Dry Through:	8 hours	24 hours
	Immersion Service:	7 days minimum	
	Recoat Minimum:	16 hours	72 hours
	Recoat Maximum:	Indefinite with itself	

* Coverage rates are estimates based on the products volume solids and make no allowance for material loss during application. Actual spread rates may vary dependent on applicator experience, surface porosity and texture.

** Extreme temperatures can dramatically shorten Pot Life.

*** Dry times vary with surface temperature, air movement, humidity and film thickness. Finish coat selection may extend maximum recoat, please request additional information by contacting Diamond Vogel Technical Service for detailed information.

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Performance Characteristics

Cerami-Tar will meet or exceed the following performance testing criteria:

Test Name	Test Method	Results
Cathodic Disbondment	ASTM G 8-85 Method A, 720 hours	No Disbondment
Permeability	ASTM E 96	0.13 Perm
Impact Resistance	ASTM 2794	Direct 120 in./lbs.
Corrosion Resistance	ASTM B 117 Salt Spray (Fog) 3,600 hours	No face blistering, face rust , or undercutting @ scribe
Water immersion	115°F, (46°C) 8,760 hours	No Effect
25% Sodium Hydroxide	140°F, (60°C) 8,760 hours	No Effect
3% Sulfuric Acid	120°F, (50°C) 1,200 hours	No Effect
5% Sodium Hypochlorite	77°F, (25°C) 1,440 hours	No Effect
5% Sodium Bisulfite	77°F, (25°C) 720 hours	No Effect

Steel panel blasted to SSPC-SP-10 Near White Blast. Applied 2 coats of Cerami-Tar @10.0 mils per coat, total of 20.0 mils dry film thickness. Do not use for immersion in concentrated solution of mineral acids or organic acids. Not for potable water. Maximum continuous immersion service temperature 120°F, (49°C). Maximum continuous non-immersion service temperature 200°F, (93°C).

Qualifications

Corps of Engineers formulation C-200 (meets or exceeds performance requirements)
 Steel Structures Painting Council formulation SSPC-Paint 16 (meets or exceeds performance requirements)
 Listed with the US and Canadian Patent Offices

Surface Preparation

All surfaces must be clean, sound, dry and free of all dirt, dust, wax, oil, grease, chalk and any other contamination that would interfere with new coating adhesion. Bare surfaces must be properly prepared. See "System Selector" for appropriate primer to use depending on the substrate.

Ferrous Metal Surfaces: (Water Immersion) Abrasive blast new steel to SSPC-SP-10, Near White Blast. For other recommended immersion prepare surface to SSPC-SP-5 White Metal Blast. Use proper abrasive to achieve an average of 1.5 to 2.0 mil profile. Blasted surfaces should be primed before flash rusting occurs. If blasting is not practical, remove loose rust and mill scale per SSPC-SP-2, Hand Tool Cleaning or SSPC-SP-3, Power Tool Cleaning. Treat rust free, cold rolled steel with a metal cleaning and etching solution.

Ferrous Metal Surfaces: (Non-Immersion) Abrasive blast new steel to SSPC-SP6, Commercial Blast Cleaning. Use proper abrasive to achieve an average of 1.5 to 2.0 mil profile. Blasted surfaces should be primed before flash rusting occurs. If blasting is not practical, remove loose rust and mill scale per SSPC-SP-2, Hand Tool Cleaning or SSPC-SP-3, Power Tool Cleaning. Treat rust free, cold rolled steel with a metal cleaning and etching solution.

Previously Painted Metal Surfaces: Power or hand washing is recommended to remove contamination. If oil or grease is present, use of a cleaner/degreaser is required. All cleaning residue must be completely rinsed from the surface. Allow to dry. Remove all coatings, rust and corrosion by abrasive blast according to SSPC-SP-10 Near White Blast or SSPC-SP-5 White Metal Blast depending upon application.

Mildew: Remove by using a solution of one part household bleach and three parts water. Apply to mildewed area and scrub. Allow solution to remain on the surface for 3 to 5 minutes and then rinse completely and allow to dry before coating application.

Application

Part A (resin) and Part B (cure) are packaged in premeasured kits. The mixing ratio is 9 parts A to 1 part B. Mix Part A and Part B separately using an explosion proof power drill with a blade type mixer. Add Part B to Part A and thoroughly mix and blend using an explosion-proof power drill and blade type mixer to disperse pigments. The material must be applied within the estimated pot life. For optimum application, air and surface temperatures should be from 40° to 90°F (4.4° to 32°C) and at least 5°F (3°C) above the dew point.

Airless Spray: Flush airless lines with Diamond Vogel N-3023 Xylol. Equipment must be clean prior to start. Apply a wet coat in even, parallel passes with 50 % overlap to avoid bare areas and pinholes. If required, crosshatch spray at right angles.

Atomizing Pressure	Tip Orifice	Material Hose ID	Manifold Filter
30:1 pump ratio @ 80–100 PSI	0.029" to 0.031"	1/4" or 3/8"	30 mesh

Roll: Use a lambswool cover, additional coats may be required to achieve desired film thickness.

Brush: Use a nature bristle brush, additional coats may be required to achieve desired film thickness.

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Product	1 Gallon Kit	5 Gallon Kit	Product	1 Gallon	5 Gallon
Part A Resin	1 Gallon Pail (short filled)	5 Gallon Pail (short filled)	Part A Resin	9.07 lbs. (4.14 kg)	38 lbs. (17.24 kg)
Part B Cure	1 Pint Can (short filled)	0.5 Gallon (full filled)	Part B Cure	1.40 lbs. (0.635 kg)	4.5 lbs. (2.04 kg)

Storage

Two years from date of manufacture when maintained in protected area at a temperature of 40° to 100°F (4° to 38°C). Subject to inspection thereafter.

Safety Precautions

***WARNING!** If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Paint Products contain chemical ingredients, which are considered hazardous. Prior to use, read container label warnings and the current Safety Data Sheet for important health and safety information. Ensure these instructions are practiced during product application and cure. **Keep out of the reach of children.**

Safety Data

“Safety Data Sheets” are available from your Diamond Vogel representative or from the Diamond Vogel website at www.diamondvogel.com. Prior to use of this product, obtain and review the Safety Data Sheet for health and safety information. Read and observe all precautionary notices on container labels. **NOT INTENDED FOR RESIDENTIAL USE.**

Limited Warranty

The technical data and suggestions for use contained in this document are true and correct to the best of our knowledge at the date of issuance. The statements of this document do not constitute a warranty, expressed or implied, as to the performance of these products. Since Diamond Vogel does not control the application of its products, or the condition of the surfaces to which they are applied, Diamond Vogel’s liability will under no circumstances exceed replacement of the product. **All technical information is subject to change without notice.**

Additional Information

Epoxies will chalk and fade with extended exposure to sunlight. Yellowing is a normal occurrence. The use of heaters that emit carbon dioxide and carbon monoxide during application may cause excessive yellowing to occur.

Cautions and Warnings information is located on the back panel of each product label.

For current information regarding VOC regulations for specific geographical regions, please contact Technical Service at Diamond Vogel Corporate Headquarters, (Contact information is located at the bottom of the page).