

TECHNICAL DATA

Product Description

Miracle Glaze is a single component, oil free, moisture-cure, polyurethane sealer and glaze coat providing an extremely durable surface through resin reinforcement of the concrete. It is made to withstand heavy foot traffic and rubber wheeled forklifts.

Intended Uses

- | | | | |
|---------------------------|-------------------|-------------------------------|-------------------------|
| Apply to: | | Protects: | |
| • Interior surfaces | • Concrete floors | • Main aisles | • Production areas |
| • Industrial environments | • Warehouse | • High wear areas | • Concrete from dusting |
| • Production areas | • Assembly areas | • Structural or support steel | |

The above are general recommendations and not intended to limit the use of Miracle Glaze. Test areas are always recommended to confirm results.
NOT INTENDED FOR IMMERSION SERVICE.

Physical Properties

Resin Type	Moisture Cure Urethane
Finish/Sheen	Gloss 80+ @ 60°
Colors*	Clear LG-0414, May be tinted using ICS Industrial colorants
Pot Life (only if colorant is added)	2 hours
Solids by Weight	60%
Solids by Volume	56%
Theoretical Coverage**	898 ft ² /gal @ 1 mil
Dry Film Thickness / Coat	2.0–3.0 mils (50 – 75 microns)
Wet Film to Achieve DFT	3.5–5.5 mils (87.5 – 137.5 microns)
Coverage at DFT**	300–450 ft ² /gal
VOCs	3.3 lbs./gal (400 grams/liter)
Reduction Solvents	DO NOT THIN
Clean-up Solvents	Diamond Vogel N-1110 Mineral Spirits or N-3023 Xylol
Drying Time***	Recoat Time Minimum: 5 hours at 75°F (24°C) and 50% Relative Humidity Recoat Time Maximum: 48 hours at 75°F (24°C) and 50% Relative Humidity
ASTM D1640-83 reapproved 1989	

- * Exposure to carbon dioxide and carbon monoxide during the application or curing process may cause discoloration to occur. This product is not UV/Light stable and will yellow/amber over time.
- ** 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.
- *** Dry times vary with surface temperature, air movement, humidity and film thickness. Allow coating to dry 12 hours at 75°F (24°C), 50% relative humidity before opening to light traffic. Allow more time at lower temperatures, low humidity or for heavier traffic. Full coating properties take 14 day to develop.

Performance Characteristics

Miracle Glaze meets or exceeds the following performance testing criteria:

Test Name	Test Method	Results
Abrasion Resistance	ASTM D 4060, CS-17 Wheel 1kg Load, 1000 Cycles	30–40 mg
Coefficient of Friction	ASTM D 2047 COF James Friction Tester	0.52–0.55
Tensile Strength	ASTM D 2370	5,000 PSI (34,000 kPA)
Percent Elongation	ASTM D 2370	120%
Flexibility	ASTM D 522	Passes highest rating 1/8"
Sward Hardness	ASTM D 2134 (1 mil film)	32–36

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Qualifications

Performance criteria meet or exceed Master Painters Institute (MPI) #31 approval standards.

Chemical Resistance for Splash and Spillage

Chemical	1 day	7 day	Chemical	1 day	7 day
Solvents:			Salts and Bases:		
d-Limonene	G	F	Ammonium Hydroxide 10%	E	E
Jet Fuel – JP-4	E	E	Sodium Hydroxide 50%	E	E
Gasoline	G	F	Sodium Chloride 20%	E	E
Mineral Spirits	E	E	Acids:		
Methylene Chloride	P	P	Hydrochloric Acid 10%	E	G
Xylene	G	F	Hydrochloric Acid 30% (Muriatic)	F	P
Methyl Ethyl Ketone (MEK)	P	P	Nitric Acid 10%	F	P
Propylene Glycol Methyl Ether Acetate (PMA)	F	P	Phosphoric Acid 50%	E	G
Ethylene Glycol (Antifreeze)	E	G	Sulfuric Acid 37% (Battery Acid)	G	F
Isopropyl Alcohol	G	F	Acetic Acid 10%	G	F
Methanol	P	P	Citric Acid 10%	E	E
Miscellaneous Chemicals:			Oleic Acid	G	F
Ammonium Nitrate 20%	E	E	Miscellaneous Chemicals:		
Bleach	E	E	Skydrol® 500B	P	P
Brake Fluid	P	P	Skydrol® LD4	P	P
Motor Oil (SAE 30)	E	E	Trisodium Phosphate	E	E
Laundry Soap 1%	E	E			

Ratings: E - Excellent, G - Good, F - Fair, P - Poor

Based on 1-day and 7-day spot testing on concrete, coating was cured 2 weeks prior to testing.

The information included in this chart reflects Miracle Glaze's resistance to these chemicals in environments where the coating may periodically come in contact with such materials. Cleaning and general maintenance will prolong the integrity of moisture cure coatings. For more detailed information, contact your local Diamond Vogel sales representative.

Note: Reduced chemical resistance and increased staining is possible in pigmented versions of this system. Skydrol® is a registered trademark of Monsanto.

Surface Preparation

All surfaces must be clean, sound, dry and free of all dirt, dust, efflorescence, wax, oil, grease, chalk, previous paint films, curing compounds, form release agents and any other contamination that would interfere with new coating adhesion. Bare surfaces must be properly prepared prior to application of this product. See "System Selector" for appropriate primer to use depending on the substrate.

Masonry Surfaces: New concrete and mortar should cure for a *minimum* of 30 days at 72°F (22°C) prior to coating application. Level all surface projections and mortar spatters by stoning. Rake mortar joints clean and remove all soluble salts. If oil or grease is present, use of a cleaner/degreaser is required prior to shot-blasting or acid etching. All cleaning residue must be completely rinsed from the surface. It is recommended that bare concrete surfaces be roughened prior to coating application.

Shot blasting: Shot-blasting equipment should be vacuum equipped to reduce amount of spent shot on the floor. The profile produced should be uniform and the floor should be vacuumed after blasting to remove debris. Shot blasting can be an effective method removing previous paint films and curing compounds.

Acid etching: Prepare a 1:1 solution of muriatic acid and water. Apply the solution to the floor; if the concrete does not react to the acid solution by bubbling vigorously, a curing compound may be present and the floor will need to be mechanically abraded by shot blasting. Scrub the floor with stiff bristle brushes or power floor scrubber with abrasive pad attachment until the bubbling reaction stops. Rinse the floor, preferably with high-pressure water. If a high-pressure rinse is not possible, rinse and remove water a *minimum* of three (3) times. **CAUTION! ACID SOLUTION AND/OR UN-NEUTRALIZED RINSE WATER MUST NOT BE ALLOWED TO FLOW INTO GROUND OR SEWER SYSTEM (DRAINS).**

Previously Painted Masonry Surfaces: Restore the surface to bare concrete by chemical stripping or shot blasting and proceed as directed above. If oil or grease is present, use of a cleaner/degreaser is required prior to shot blasting. All cleaning residue must be completely rinsed from the surface. Allow to dry.

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.

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Premix for 3 minutes using a blade type mixer with a low speed drill. The material will not stay suspended, occasional stirring is required. Intermix tinted containers to ensure color uniformity. Five (5) gallon containers may be tinted. The tint ratio is two (2) quarts colorant to a five (5) gallon container; mix only enough material which can be used in a two-hour period. **Note:** After the colorant is added, Miracle Glaze will not store overnight. On ground level floors use Mult-E-Prime 505 as a primer and apply Miracle Glaze unthinned, as topcoat. Apply when air and surface temperatures are between 65° and 95°F (18° to 35°C) and the relative humidity is above 40%. Provide ventilation by forced air movement and extinguish all pilot lights. Lower temperatures and humidity will inhibit proper film formation. Do not apply to surfaces that are damp. Do Not Thin.

Brush and Roller: Apply product in full even coats. Maintain a wet edge. Allow the product to dry until tack free before recoating. Must be recoated within 48 hours to ensure intercoat adhesion. **A lamb's wool pad applicator is recommended.**

Airless Spray: Spray application of this material is not recommended.

Packaging**Shipping Weight**

Product	1 Gallon	5 Gallon	Product	1 Gallon	5 Gallon
Miracle Glaze	1 Gallon Pail	5 Gallon Pail	Miracle Glaze	12.26 lbs. (5.56 kg)	59.66 lbs. (27.06 kg)

Storage

Two years from date of manufacture when maintained in protected area and at temperatures 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. Insure 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 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

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).