MONOCHEM

MONOCHEM 200®

TECHNICAL BULLETIN

MADE IN U.S.A.

2K Water Based Epoxy Coating

PRODUCT DESCRIPTION:

MONOCHEM 200 is a two component, water based, 100% epoxy coating. It is environmentally friendly with Zero VOC, Zero HAPs and does not contain toxic fumes or odor. **MONOCHEM 200** is formulated as an interior general purpose, user-friendly, architectural, industrial/residential, institutional and transportation maintenance coating.

BASIC USES:

MONOCHEM 200 can be applied on concrete and masonry, prepared metals, wood, drywall and gypsum board. Common applications include healthcare facilities, schools, hospitals, machinery rooms, warehouses, factories, auto repair and residential garage floors.

MONOCHEM 200 conforms to the U.S.D.A. requirements for coatings in contact with food.

FEATURES:

- Zero VOC, Zero HAPs, No Odor
- Available in Gloss, Semi-Gloss & Low-Gloss
- Choice of Colors, Standard & Custom
- Chemical, Stain & Hot Tire Resistant
- USDA Acceptable
- Fast Drying
- Scrub Resistant
- Anti Microbial
- **Antimicrobial properties built in to protect Monochem 200 provide mold and mildew-resistance to the dried film.*

Product Qualifications	
Cal Green	Yes
OTC (Industrial Maintenance)	Yes
SCAQMD (Industrial Maintenance)	Yes
CARB (Industiral Maintenance)	Yes
LEED (New Construction)	Yes
LEED (New Schools / CHPS)	Yes

PACKAGING:

MONOCHEM 200 is two-components with a 1:1 Mixing volume ratio. It is packaged in a clear base or white base. It may be tinted with universal colorants to match any color. **MONOCHEM 200** is available in gloss or low-gloss.

ITEM NO. 1200 Clear Base, Semi-Gloss. Short-Fill Part A: 12 OZ/Gal
ITEM NO. 1220 Clear Base, Low-Gloss. Short-Fill Part A: 12 OZ/Gal

ITEM NO. 1212 White Base, Semi-Gloss. Short-Fill Part A: 6 OZ/Gal
ITEM NO. 1250 White Base, Low-Gloss. Short-Fill Part A: 6 OZ/Gal
ITEM NO. 1260 White Base, Eggshell Short-Fill Part A: 6 OZ/Gal

SUGGESTED PRIMERS:

AQUAPRIME is required for drywall, plaster, wood, & concrete.
Item No. 5900 - **AQUAPRIME** Multi-Surface Primer

MONOCHEM 21: Ideal for top coating bare concrete, wood, prepared metals, oil/solvent/alkyd/unknown or water based coated surfaces. Easily adheres to non porous surfaces like marble, glazes and very smooth concrete.
Item No. 2121 - **MONOCHEM 21** 100% Solids Epoxy Primer

MIXING INSTRUCTIONS:

Mix at a 1:1 ratio: 1-gallon of Part A to 1-gallon of Part B. Stir Part B well before adding to Part A. Mix with a low speed mixer for 2-5 minutes or with a stir stick for 5-10 minutes, scraping the bottom and sides of the container. Mix only an amount of material that can be used within a 3-hour period. Mixed material must be discarded after 3 hours.

TECHNICAL DATA:

Solids by Weight, Color	53 ±2%
Solids by Volume, Color	39 ±2%
Solids by Weight, Clear	46 ±2%
Solidsy by Volume, Clear	44 ±2%
Colors	Clear, White Base, or Choice of Colors
Finish (based on MPI Gloss Levels) @60°	Semi-Gloss: 35-70°, Low-Gloss: 25-35°, Eggshell: 10-25°
VOC Level	Zero
Mixing Ratios (By Volume)	Mix 1 Part A To 1 Part B
Induction Time	None
Mix Viscosity	80-90 KU
Pot Life @77° F	3 hrs
Recoat Time @77°F	**3 hrs (NOT TO EXCEED 8 HOURS)**
Full Use, Light Traffic (Foot)	24-48 hours
Full Use, Heavy Traffic (Foot)	72-96 hours
Vehicle Use	5 days
Full Cure	Up to 14 days

Cure and dry times vary depending on temperature, mil thickness, porosity and type of substrate.

TYPICAL COATING PERFORMANCE:

(14-day cure @ 77° F.)

Pencil Hardness (ASTM D-3363)	4H
Scrub Resistance (ASTM D2486)	2,000 + cycles
1/4 Inch Mandrel Bend	180°
Cross Hatch Adhesion (ASTM D-3359-90)	5A
Adhesion (concrete) (ASTM D7234)	250 PSI, concrete failure
Impact Resistance, (ASTM D2794-90)	
Direct	35 in-lb
Reverse	5 in-lb
Direct to Metal	50 in-lb
Reverse Impact	4 in-lb
Tensile Strength (ASTM D2370)	2,389 lbs/sq. in
Tabor Abrasion (ASTM D4060-90)	CS-17 Wheels, 1Kg/Load etc - 65 mg loss
Moisture Vapor Transmission (ASTM F1249)	5.75 g/m2
Salt Spray (ASTM B117) 2000 Hours	Pass
Chemical Resistance (ASTM D1308)	Table

PREPARATION:

Surface preparation is critical to product performance.

Surfaces to be coated must be dry (< 15% moisture) and clean, free from adhesion affecting contaminants like dirt, dust, oil, grease, wax and loose materials.

BARE CONCRETE SURFACES:

- Bare concrete surfaces must be fully cured, porous, structurally sound, and free from rock pockets, voids, cracks, holes etc that are larger than 1/16".
- Dense (non-porous) concrete should be primed with **MONOCHEM 21**, sandblasted, shot blasted, or acid etched (2-3 times) to achieve a 120 grit feel for proper penetration and adhesion.

For detailed information, refer to the **APPLICATION INSTRUCTIONS For MONOCHEM FLOOR & DECK COATINGS**.

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PROTECTIVE COATINGS

TRAFFIC COATING 09670

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PREVIOUSLY PAINTED CONCRETE SURFACES:
The composition of the existing coating should be determined prior to application.

LATEX BASED PAINT:
•Remove all loose, peeling or poorly bonded paint.
•Surfaces must be mechanically abraded using 60-80 grit sandpaper .
•Clean surfaces by using **MONOCHEM CLEAN POWER** or by scrub washing with a solution of ½ cup TSP to one gallon of warm water. Pay special attention to areas where build-ups of dirt, grease and oil exist. These areas should be scrubbed clean.
•Dull glossy surfaces by sanding or by using a chemical deglosser.

OIL BASED PAINT: Conduct a light scuffing and apply one coat of **MONOCHEM 21** Epoxy Primer on a clean, contaminant free surface. When the primer is slightly tacky (approximately 4-6 hours; not to exceed 12 hours), apply **MONOCHEM 200**. A test patch is required to ensure proper adhesion. For more information, follow the product data and label instructions.

UNPAINTED METAL SURFACES:
All rust and contaminants must be removed by lightly blasting with fine abrasives or by conducting a light etching with **MONOCHEM METAL ETCH.** To minimize rust formation in areas where rust has previously formed, we require applying a rust inhibitive metal primer within 6 hours after preparing the surface.

Non Ferrous (galvanized, aluminum, stainless steel): Remove all oils or films with a neutral detergent or emulsion cleaner. Blast lightly with fine abrasives or conduct a light etching. Then rinse using a Zinc treatment and apply coatings within 6 hours.

Corrosive Metals: Remove all the loose rust, dirt, grease or other contaminants by one of the following depending on the degree of cleanliness required. Blast SSPC-SP3; SSPC-SP2; SSPC-SP6; SSPC-SP7. Blast lightly with fine abrasives or conduct a light etching. Then rinse using Zinc treatment and prime with a rust inhibitive primer within 6 hours.

APPLICATION: (Horizontal)
- **MONOCHEM 200** is applied at the approximate spread rate of 225-275 square feet per gallon, yielding 2-2.5 dry mils of thickness per coat.
- Two coats are required.
- Apply the second coat 2-4 hours (not to exceed 24 hours) after the first coat, while the first coat is still tacky.
- Silica sand #30 or #60 may be added or broadcast to create a non-skid finish.

APPLICATION: (Vertical)
- **Drywall and Gypsum Board** require a PVA primer (like **AQUAPRIME**) prior to application to ensure the proper hide.
- **MONOCHEM 200** is applied at the approximate spread rate of 225-275 square feet per gallon, working in 2x2 foot sections.
- Two coats are required. Apply a medium to heavy first coat then allow a two minute setup time before back rolling all rundowns in the same section. Allow 2-4 hours dry time before applying a second coat.
- Do not spread the coating too thin over an entire area and allow it to dry hard before applying a 2nd coat.

DRY TIMES:
MONOCHEM 200 at 77°F will dry in 3 hours**.** Wait approximately 24 hours for light foot traffic use, 48 hours for heavy foot traffic, and 5 days for vehicle exposure. Full cure requires 14-days.

PRECAUTIONS:
- **MONOCHEM 200** is for interior use only. It is not UV stable and should not be exposed to direct sunlight.
- Do not apply over poorly-bonded paint.
- Do not apply if moisture in the substrate is higher than 15%.
- Do not apply to a surface exhibiting hydrostatic pressure.
- Do not apply if surface temperature is over 90°F or below 55°F.
- Do not apply if surface pH is above 8.

COMPATIBILITY: Always apply a test patch to check coverage, adhesion, compatibility and for desired results. Responsibility for determining the adhesion and coverage of **MONOCHEM 200** to an existing finish rests with the applicator.

TABLE 1
CHEMICAL RESISTANCE OF **MONOCHEM 200** PER ASTM D 1308 24 HOUR EXPOSURE

Gasoline	No Effect
Motor Fluid	No Effect
Transmission Fluid	No Effect
Mineral Spirit	No Effect
Brake Fluid	Slight Softening, Film Recover
Skydrol LD4	Slight Softening, Film Recover
10% HCL	No Effect
10% Nitric	No Effect
28% Sodium Hydroxide	No Effect
10% Sulphuric Acid	No Effect
10% Hydrochloric Acid	No Effect
10% Acetic Acid	No Effect
2% Aqueous Pine Sol	No Effect
40% Cleaner Concentrate	No Effect
DI Water	No Effect
Urine	No Effect
Coffee	No Effect
Vegetable Oil	No Effect
5% Tide	No Effect

TINTING:
MONOCHEM 200 is available in a clear base and white base that can be tinted with Universal Colorants. Tint only Part A; Part B cannot be tinted. The **MONOCHEM 200** Part A is short-filled:
White Base: 6 ounces of colorant per gallon **MUST** be added.
Clear Base: 16 ounces of colorant per gallon **MUST** be added.

IMPORTANT NOTE: Deep or dark colors made from a clear base should always be used with a primer. **MONOCHEM 1** or **MONOCHEM 21** pigmented are recommended when applying **MONOCHEM 200** over drastic color changes.

CLEAN UP:
Clean tools and equipment with soap and water immediately after use. Dried material will require a legally compliant solvent, paint thinner or stripper to remove.

SHELF LIFE:
MONOCHEM 200 is useable for a 12-month period stored at room temperature (72°F) in a sealed container.

CAUTION:
All Monopole floor coatings exposed to water, oil, grease, or any liquids may create a slippery surface. Monopole Inc. will not be responsible for injury caused in a slip or fall situation. It is the end users responsibility to determine the suitability and safety of our coatings for their particular use and application.

WARRANTY INFORMATION: MONOPOLE believes that the information in this publication is an accurate description of the typical characteristics and/or uses of the product or products. It is your responsibility to thoroughly test the product in your specific application to determine its safety and performance capabilities. Since use of this product is beyond our control, MONOPOLE, INC. cannot assume any risk or liability for results obtained when not used according to our specifications and directions. Unless MONOPOLE provides a specifically written statement of fitness for a particular use, MONOPOLE'S sole warranty is that the product will meet its current sales specifications. MONOPOLE disclaims any other expressed or implied warranties, including the warranty of merchantability and fitness for use. Your exclusive remedy and MONOPOLE'S sole liability for breach of warranty is limited to a refund of the purchase price or replacement of any product proven to be defective. In no event shall the seller be liable for any loss of profits or other consequential damages, including labor charges.