MC EPOXY Standard & Fast Cure

ULTRA DURABLE TECHNOLOGIES
Manufacturing Innovative Coatings

PRODUCT NAME

MC EPOXY

MANUFACTURER

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PRODUCT DESCRIPTION

MC Epoxy was developed to be UDT's most versatile and economical, clear, two- component, 100% solids epoxy for a variety of interior applications. Easily pigment MC Epoxy with UltraColor E/P or UltraColor HTS pigments and adjust the dry time by choosing either Fast Cure Part B or Standard Cure Part B.

UDT MC Epoxy is frequently specified as a thin-film clear or pigmented primer for UDT Grind & Seal systems, a "body coat" and "grout coat" for UDT Chip-Flake and Quartz broadcast systems, a carrier for UDT Metallic systems, and a stand-alone, solid-colored industrial epoxy system.

WHY CHOOSE UDT MC EPOXY?

Pigmenting MC Epoxy at the jobsite provides advantages for ordering and inventory. Choose from UltraColor EP, UltraColor HTS, and Metallic pigments. The long, open recoat window allows for multiple top-coat options to provide additional protection and abrasion resistance.

UNIQUE ADVANTAGES

- Very durable and chemical resistant
- Easy to use with extended working time
- Low odor & economical
- Low viscosity / great self-leveling
- Long open recoat window
- Color with UltraColor E/P or UltraColor HTS Pigment or Metallics

PROVEN INDUSTRIES

Residential: Garages and decorative concrete floors
Commercial: Stadiums, restaurants, kitchens, restrooms, decorative floors
Institutional: Corridors, loading docks, warehouses
Government: Armed force bases, airport hangars, warehouses

PACKAGING

2 components, 2:1 ratio (2 Parts A : 1 Part B)
3-gallon Kit: 2 x 1-gal. can Part A + 1 x 1-gal. can Part B
15-gallon Kit: 2 x 5-gal. pail Part A + 1 x 5-gal. pail Part B
Optional – UltraColor E/P or UltraColor HTS Pigments
Optional – UDT Metallics: 1 pint / 3-gallons

COVERAGE RATES

Average coverage rate: 80-320 SF / gallon (5-20 mils).
Thin-film primer coverage: up to 535 SF / gallon (3 mils).
Texture, absorption of surface and application processes will determine final coverage rates. Rough or porous concrete may require additional material.

SHELF LIFE

12 months unopened when stored at room temperature (59-77°F, 15-25°C)

TECHNICAL DATA

	Standard Cure	Fast Cure
Mixing ratio (by volume)	2 Part A: 1 Standard. Cure B	2 Part A: 1 Fast Cure B
Gel time (1 gallon)	35 minutes	20 minutes
Working time (on floor)	25 minutes	17 minutes
Re-coat window	24 hours	24 hours
Dry times @ 72°F,10 mils		
To Touch	8 hours	4 hours
Foot traffic	12 hours	7 hours
Chemical resistant	5 days	5 days
Full cure	14 days	14 days

Additional Standard Cure & Fast Cure Properties

Solids content	98% +-2%	ASTM D2369
VOC content	73 g/L	EPA 24
Gloss @ 60° angle	85-100	ASTM D523
Mixed viscosity	400-500 cps	ASTM 2196
Tensile strength	8,500 psi	ASTM D638
Elongation	5.50%	ASTM D638
Compressive strength	11,000 psi	ASTM D695
Pull-off adhesion	concrete failure	ASTM D7234
Shore D hardness	73-78	ASTM D2240
Abrasion, Taber CS-17, 1000 cycles	40-45 mg loss	ASTM D4060

CHEMICAL RESISTANCE

Methanol	1	10% acetic acid	3
Bleach	3	50% sodium hydroxide	1
Mustard	2	Jet fuel (JP-4)	1
Methyl Ethyl Ketone	2	10% hydrochloric acid	1
Brake fluid	1	30% hydrochloric acid (Muriatic)	1
Skydrol 500 B	1	37% sulfuric acid (Battery acid)	1

1=No Effect, 2=Slight, 3=Moderate, 4=Severe

ENVIRONMENTAL TESTING

Moisture Content: Concrete must be cured prior to coating (poured and aged at a material temp of at least 75°F for at least 30 days), structurally sound, and free of contaminants including but not limited to waxes, loose paint, dust, dirt, grime, oils, release agents, curing compounds, and any surface laitance (a layer of weak and nondurable material). All interior concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission that may lead to blistering and failure of the coating system. It is the coating applicator's responsibility to conduct calcium chloride testing (ASTM F1869) or plastic sheet testing (ASTM D4263) and relative humidity probe testing (ASTM F2170) to determine if excessive levels of moisture vapor emissions are present before applying any coatings. Slabs on grade shall have a moisture vapor emission rate of less than 3 pounds / 1,000 sf / 24 hours when measured by calcium chloride test and less than 75% relative humidity when measured using in situ probes. Test the air temperature, relative humidity, and floor temperature in the area using a Psychrometer and Infrared Thermometer.

Air Temperature: MC Standard Cure must not be applied when the air temperature is above 95°F or below 50°F. MC Epoxy Fast Cure must not be applied when the air temperature is above 95°F or below 40°F. See UDT Epoxy Cure Time Comparison Chart for epoxy dry times by temperature.

Relative Humidity (RH): MC Epoxy must not be applied when the RH is above 80%.

Floor Temperature and Dew Point: MC Epoxy must not be applied when the substrate (floor) temperature is less than 5° above the dew point. Monitoring the substrate temperature, indoor temperature and RH, and utilizing fans and/or dehumidifiers as needed will help correct or prevent existing or possible dew point conditions until the installation is complete. All substrates must be prepared by trained or experienced contractors or maintenance personnel. UDT and its representatives or distributors will not be responsible for coating failures due to improper preparation processes, undetected moisture vapor emissions, or other unacceptable environmental conditions.

FLOOR PREPARATION

Concrete shall be lightly shot-blasted or diamond ground with 30-80 grit metal bond diamonds to achieve a minimum of CSP 2 - CSP 3 concrete surface profile. Concrete must be cured prior to coating (poured and aged at a material temp of at least 75°F for at least 30 days), structurally sound, and free of contaminants including but not limited to waxes, loose paint, dust, dirt, grime, oils, release agents, curing compounds, and any surface laitance (a layer of weak and nondurable material). If prepared concrete is suspected to be contaminated with any of these materials, test for their presence by spraying a thin coat of water onto the concrete. If water beads on the surface, contamination is likely present and the concrete should be scrubbed with a degreaser or mild detergent, rinsed with clean water, and allowed to thoroughly dry prior to coating.

MIXING INSTRUCTIONS

1) Wear gloves and safety glasses when mixing. Mix quantity that will be used within working time.
2) Pre-mix part A for 1 minute.
3) By volume, pour out 2 parts A into a separate mixing container.
- **Optional** - Add UltraColor E/P or UltraColor HTS and mix for 1 minute or until uniform in color (see UltraColor E/P or UltraColor HTS TDS for quantity).
- **Optional** - Add 1 pint UDT Metallics into clear MC per 3 working gallons and mix until uniform in color.
- **Optional** - Add UDT Epoxy Patch Additive and mix for 3 minutes.
- **Optional** - Add up to 10% xylene for primer applications and mix for 1 minute.

4) By volume, add 1 part B (Standard or Fast Cure) to the mixing container and drill-mix on low-speed for 3 minutes.
5) Immediately pour all contents onto the floor and complete spreading and rolling within the stated working times (Standard Cure=25 minutes, Fast Cure=17 minutes)

APPLICATION INSTRUCTIONS

While a primer coat is optional for chip-flake, aggregate and metallic systems, UDT recommends a thin primer coat of MC Epoxy to minimize bubbles caused from concrete outgassing and ensure optimal adhesion to the concrete surface. For UDT MC Epoxy direct-to-concrete, body coats, and grout coats; dip and roll or use a notched squeegee and back-roll with a 3/8" nap roller. If the finished surface has debris or the recoat window has passed, abrade with 100-grit screens and/or maroon conditioning pads prior to top-coating or re-coating. For additional chemical resistance, abrasion resistance, or slip resistance, top-coat with Ultra HTS, UltraSpartic, or EPIC.

SLIP RESISTANCE

UDT recommends the use of traction additives in all coatings or flooring systems that may be exposed to wet, oily or greasy conditions. It is the contractor's and end users' responsibility to select and provide a flooring system that meets current safety standards. UDT makes no claims of longevity of SCOF or DCOF results. UDT and any distributors or representatives will not be responsible for injury incurred in a slip and fall accident.

MAINTENANCE INSTRUCTIONS

After completing the application of UDT MC Epoxy, routine sweeping, mopping, washing and mechanical scrubbing is recommended. Plain water is ideal for most environments. Use pH neutral cleaners if/where necessary. The installer should provide the owner with maintenance instructions. Clean and rinse thoroughly if floors become slippery due to animal fats, oil, grease, or soap film.

WARRANTY

Ultra Durable Technologies, Inc. products are warrantied to be of uniform quality within manufacturing tolerances. Since no control is exercised over product use, no warranty, expressed or implied, is made to the effects of such use. The seller and manufacturer's obligations under this warranty shall be limited to refunding the purchase price of that portion of the material proven to be defective. Contact your distributor or representative for more information.