UDT Polyurea

PRODUCT NAME

UDT Polyurea
& UDT Polyurea Accelerator

MANUFACTURER

Ultra Durable Technologies
355 6th Ave N
Waite Park, MN 56387
Phone: 320-258-2266
Toll-Free: 800-722-2998
Website: www.ultradt.com

ADDITIONAL INFO
(SDS, Warranty, & more)

PRODUCT DESCRIPTION

UDT Polyurea is a high-solids concrete basecoat with rapid curing properties that allow for fast chip-scraping and topcoating times. UDT Polyurea was developed as an alternative to the MC Epoxy line of coatings to provide contractors the ability to complete projects quickly, like the increasingly popular “one-day garage floor” system.

UDT Polyurea is pre-pigmented in Mineral Gray and Medium Tan. The Summer version is designed for warmer, humid environments, while UDT Polyurea Accelerator can be added for colder temperature applications.

WHY CHOOSE UDT POLYUREA?

Due to its flexibility and tenacious bond strength to concrete, UDT Polyurea is typically specified as a thin-film, pigmented “body coat” for the UDT Chip Flake and Quartz systems.

Contractors choose Summer for its extended working time and industry-comparable fast dry times. UDT Polyurea Accelerator can be added when temperatures are near 60°F and fast dry times are still needed, or to customize dry times as desired.

Contractors appreciate the friendly “flow” and “feel” of UDT Polyurea along with the excellent hide (opacity) and lack of settling in the containers.

UNIQUE ADVANTAGES

- Low odor & low viscosity
- Rapid dry times
- Excellent pigment stability and opacity (hide)
- Flexible
- Non-hazardous / DOT & IATA (air) non-regulated

PROVEN INDUSTRIES

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

PACKAGING

2 components with a 2:1 ratio (2 Parts A to 1 Part B)
3-Gallon Kit: 2x1-gal cans Part A + 1x1-gal can Part B
15-Gallon Kit: 2x5-gal pails Part A + 1x5-gal pail Part B
Accelerator: 32-oz bottle (available separately)

COVERAGE RATES

Recommended coverage rates and mil thickness:
Apply between 5-7 mils wet (230-320 sq ft / gal)
Do not apply more than 8 mils wet (<200 sq ft / gal)
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 (72°F, 40% RH)

Solids Content	99%±1%	ASTM D2369
VOC Content	6 g/L	ASTM D5201
Mixed Viscosity	750 cps	ASTM D2196
Taber Abrasion CS-17, 1000 cycles	61 mg loss	ASTM D4060
Konig Hardness	85	ASTM D4366
Tensile Strength	1982 psi	ASTM D2370
Elongation	45.83%	ASTM D2370
Mandrel Bend (1/8”)	Pass	ASTM D522
Reverse Impact Resistance	154	ASTM D2794
Pull-Off Adhesion	> 750 psi (concrete failure)	ASTM D7234
Permeability	0.87	ASTM D1653
Recoat Window	24 hours	
Full Cure	7 days	

UDT Polyurea

ULTRA DURABLE TECHNOLOGIES
Manufacturing Innovative Coatings

DRY TIMES

Times are approximate and will vary depending on air temperature, floor temperature, and humidity.

SUMMER (without Accelerator)	60°F 25% RH	70°F 50% RH	85°F 75% RH
Working Time (mins)	30	20	15
Chip Scraping Time (hours)	2.5	2	1

FALL (2 oz Accelerator per 3 gal)	60°F 50% RH	70°F 50% RH
Working Time (mins)	15	12
Chip Scraping Time (hours)	1.75-2	1.25-1.5

WINTER (4 oz Accelerator per 3 gal)	5°F 50% RH	40°F 50% RH	70°F 50% RH
Working Time (mins)	30+	15	7
Chip Scraping Time (hours)	4	1.75-2	0.75-1

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 must have a moisture vapor emission rate of less than 3 pounds / 1,000 sq ft / 24 hours when measured by calcium chloride test and less than 75% relative humidity when measured using in situ probes. Rates above these thresholds require a moisture vapor barrier. (see UDT MV Epoxy Primer)

Air Temperature and Humidity / RH: High temperatures and high humidity will shorten the dry time and working time. Low temperatures and low humidity will lengthen the dry time and working time.

Floor Temperature and Dew Point: UDT Polyurea must not be applied when the substrate (floor) temperature is less than 5°F above the dew point. Test the air temperature, relative humidity, and floor temperature in the area using a Psychrometer and Infrared Thermometer. Monitor the substrate temperature, indoor temperature, and RH. Utilize fans and/or dehumidifiers as needed to 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.

FLOOR PREPARATION

Concrete must be lightly shot-blasted or diamond ground with 30- to 80-grit metal bond diamonds to achieve a minimum Concrete Surface Profile (CSP) of 2 to 3. Concrete must be cured prior to coating (poured and aged at a material temperature 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 without Accelerator

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.
4) By volume, add 1 part B to the mixing container and drill-mix on low speed for 90 seconds.
5) Immediately pour all contents onto the floor and complete spreading and rolling within the stated working time in the table above.

MIXING INSTRUCTIONS with Accelerator

UDT Polyurea Accelerator is designed to be used only with UDT Summer Polyurea. It will speed up the working time, dry time, and chip flake scraping time. This allows the installer to adjust the speed based on the environmental temperature, relative humidity, and desired working parameters.

Accelerator may be pre-mixed into Part A at any time prior to use (such as before travel to the job site). Mark any containers holding pre-mixed Part A & Accelerator.

If mixing less than a 3-gallon kit, use the same proportions shown in the Ratios table below. (For example: if mixing 1.5 gallons of "Fall", add 1 oz of Accelerator to 1 gallon of Part A, then use ½ gallon of Part B.)

ONLY MIX ACCELERATOR INTO UDT POLYUREA PART A.
NEVER MIX ACCELERATOR DIRECTLY INTO PART B.

1) Wear gloves and safety glasses when mixing. Mix quantity that will be used within working time.
2) Shake Accelerator jug for 15 seconds before pouring.
3) By volume, pour out 2 parts A into a separate mixing container.
4) Measure and add appropriate amount of Accelerator (1-4 oz).
5) Drill mix Accelerator & Part A together for 30 seconds.
6) By volume, add 1 part B to the mixing container and drill-mix on low speed for 90 seconds.
7) Immediately pour all contents onto the floor and complete spreading and rolling within the stated working time in the table above.

RATIOS	**Summer**	**Early Fall**	**Fall**	**Late Fall**	**Winter**
Part A	2 gal	2 gal	2 gal	2 gal	2 gal
Accelerator	none	1 oz	2 oz	3 oz	4 oz
Part B	1 gal	1 gal	1 gal	1 gal	1 gal

APPLICATION INSTRUCTIONS

1) Patch cracks, holes, and spalling prior to application. Wear spiked shoes and pour UDT Polyurea on floor.
2) Spread evenly with a 5- to 7-mil squeegee.
3) Roll all areas with a high-quality 3/8" nap woven roller to ensure a consistent application thickness in all areas.
4) Broadcast chips before the coating begins to set up.
5) Carefully scrape and remove loose chip flakes once UDT Polyurea has hardened sufficiently (see Dry Times tables above).
6) Mix and apply UltraSpartic. See UltraSpartic TDS for mixing and application instructions.