



# ULTRACOTE 705 AP

(Aliphatic Polyurethane)

**(Paints & Coatings)**

**HEAVY DUTY, HIGH PERFORMANCE**

**GENERIC CLASS:** Aliphatic polyurethane.

**PRODUCT DESCRIPTION:** Ultracote 705 AP is a high build, smooth finish, gloss topcoat having excellent resistance to splash and spillage of acids, alkalies, solvents, salts and water. Highly resistant to abrasion, wet conditions, corrosive fumes and chemical contact. Outstanding retention of initial color and gloss on long-term weather exposure.

**TYPICAL USES:** Coating steel tank exteriors, equipment and structures, galvanized steel, non-ferrous metals, concrete and masonry in highly corrosive environments or for prolonged exterior exposure. It is an excellent coating for chemical processing, pulp and paper, petro chemical, agricultural, breweries, offshore, power plant and similar industries. It is also recommended for heavy marine, steel, towers and waste water treatment where a high resistant and attractive coating is desired.

**LIMITATIONS:** Not recommended for immersion service on highly concentrated acids, alkalies and ketone solvents.

### CHEMICAL RESISTANCE GUIDE:

Exposure	Splash & Spillage	Fumes
Acids	Very Good	Excellent
Alkalies	Very Good	Excellent
Solvents	Very Good	Excellent
Salt	Excellent	Excellent
Water	Excellent	Excellent

**TEMPERATURE RESISTANCE:** (Dry Basis)

Sustained	:	200°F (93°C)
Intermittent	:	250°F (121°C)

**WEATHERING/HUMIDITY:** Excellent (ASTMD 2247-68)

**FLEXIBILITY:** Excellent

**ABRASION RESISTANCE:** Excellent (Federal Test Method Standard No. 141, Method 6192, CS-17 Wheel, 1,000 grams load).

**IMPACT RESISTANCE:** Excellent

**SUBSTRATES:** Apply over properly primed surfaces.

**PRIMER REQUIRED:** Normally applied over inorganic zinc and organic zinc primers, epoxies, phenolics, or others as recommended. A tie coat is required when applying over inorganic zinc primer.

**TOPCOAT:** Normally none. May be topcoated by itself.

**COLORS:** Various

**SHELF LIFE:** Twelve months

**COMPONENT:** Two

**FINISH:** Gloss

**FLASH POINT:** (Pensky-Martens Closed Cup)

Ultracote 705 AP

Part A 88°F (31°C)

Ultracote Urethane Converter

Part B 100°F (38°C)

Ultracote Thinner #40

77°F (25°C)

**CALCULATED VOLUME SOLIDS:**

Ultracote 705 AP 60% ± 2%

**RECOMMENDED DRY FILM THICKNESS PER COAT:**

3 - 5 mils (75 - 125 microns)

**CALCULATED COVERAGE PER MIXED GALLON:**

962 sq. ft. per mil (23.6 sq. m./li @ 25 microns)

320 sq. ft. @ 3 mils (7.85 sq. m./li. @ 75 microns)

192 sq. ft. @ 5 mils (4.71 sq. m./li. @ 125 microns)

**NOTE:** Overthickness over inorganic coatings may result in softening and/or solvent entrapment. Assume loss factor when estimating job requirements at prevailing condition at site.

**SURFACE PREPARATION:** All surfaces must be clean, dry and free of any dirt, dust, chalk, grease, oils, salts, curing compounds, release agents, preservatives and other deleterious materials before application is performed. Wipe contaminated surfaces to be coated with clean rags soaked in Thinner #2 or in ketone solvents in accordance with SSPC-SP-1.

**WELDING:** Welding should precede coating. In the event welding or flame cutting is performed on metal already coated with this product, do so in accordance with the latest instructions in USA Standard Z49:1 "Safety in Welding and Cutting". All welded, burned or otherwise damage areas should be cleaned to base metal, prepared and recoated as specified.

**CONCRETE AND MASONRY:** Clean surface by abrasive "brush-off" blast or etch with 10% hydrochloric acid. If etching is employed, the acid solution should be applied at spreading rate of 1 1/2 pint per square yard to obtain total wetting of the substrate, and thoroughly worked into the surface by stiff bristled brushes until the bubbling reaction has subsided. The etched surface should then be thoroughly washed and scrubbed with clean water and stiff bristled brushes and/or high pressure water hosing to remove all salts and loose particles. Surfaces and substrates must be thoroughly dry before proceeding with any coating application. Do not apply coating unless concrete has cured 28 days @ 70°F (21°C) and 50 R. H. or equivalent time. This coating can be applied directly to concrete even without primers.

**MIXING:** Power stir each component very thoroughly then combine and remix to uniform consistency before use and mix occasionally during application. Allow mix to stand for 20-30 minutes for complete chemical activation (sweat in time) and remix before application.

**MIXING RATIO:** 4 parts A to 1 part B by volume.

**THINNING:** Thin up to 15% by volume with Ultracote Thinner #40.

**WARNING:** Do not use other thinners that are not specified in the product bulletin or recommended by Techno. Use of other thinners may adversely affect product integrity and void product warranty, whether expressed or implied.

**POT LIFE:** 4-6 hours at 75°F (24°C) and less at higher temperatures. Discard products that are mixed beyond pot life limit. Part B is moisture-sensitive and will react with atmospheric moisture. Unused material must be kept tightly closed at all times.

**APPLICATION TEMPERATURES:**

Materials	:	65-85°F (18-29°C)
Surfaces	:	65-85°F (18-29°C)
Ambient	:	60-85°F (16-29°C)
Humidity	:	35-80%

**NOTE:** The surface should be dry and at least 5°F (2°C) above the dew point. This product is moisture sensitive until cured.

**MATERIAL APPLICATION:**

**SPRAY TECHNIQUE:** Use adequate air volume for correct operation of equipment. Use a 50% overlap with each pass of the gun. Apply a mist coat, when tacky follow with a full wet coat. For conventional spray, hold gun 12-14 inches perpendicular from the surface and for airless spray the gun shall be 18-20 inches perpendicular from the surface.

**SPRAY EQUIPMENT:** Use suggested equipment, or equal.

**CONVENTIONAL (AIR SPRAY) SPRAY:**

Mfr. & Gun	DeVilbiss Binks #18	
PMBC or JGA	or #62	
Fluid Tip	FX or E	63B
Air Cap	704/78	63B
Air Hose	5/16" or 3/8"	5/16" or 3/8"
Material Hose	3/8" or 1/2"	3/8" or 1/2"
Atomizing		
Pressure	75-90 psi.	75-90 psi.
Pot Pressure	10-20 psi.	10-20 psi.

Low temperatures or longer hoses require higher pot pressure. Proper atomization is necessary to obtain a smooth finish.

**AIRLESS SPRAY:**

Mfr. & Gun			
Binks			
DeVilbiss	Graco	Model 700,	
JGB-507	205-591	Mercury5C	
Tip Orifice	0.009" to	0.015"-	0.015"-
	0.011"	.017"	.017"
Atomizing	2,200-	2,200-	2,200-
Pressure	3,300 psi.	3,300 psi.	3,300psi.
Material	1/4"	1/4"	1/4"
Hose	or 3/8"	or 3/8"	or 3/8"
Manifold			
Filter	100 mesh	100 mesh	100 mesh

**CAUTION:** Use 100 mesh filter and gun with 100 mesh tip strainer. Use appropriate tip and atomizing pressure for equipment, applicator technique and weather conditions. Use teflon packings.

**BRUSH:** Recommended for touch up only. Use natural bristle brush applying with full strokes. Avoid rebrushing. Avoid using roller.

**DRYING TIME:**

To Touch	:	2 hrs. @ 75°F (24°C)
To Handle	:	10 hrs. @ 75°F (24°C)
To Recoat	:	6-8 hrs. @ 75°F (24°C)
Curing Time	:	24 hrs.

**CLEAN-UP:** Clean all equipment immediately after use with Ultracote Thinner #2 or Methyl Ethyl Ketone (MEK). Flush and clean spray equipment before material sets up.

**STORAGE CONDITION:**

Temperature	:	40°F (4°C) to 110°F (43°C)
Humidity	:	0-100%

**PACKAGING:** Gallon (3.785 liters)  
Pail (4 & 5 Gallons)

**SAFETY INFORMATION:** This product (and any recommended thinners) contains solvents and/or other chemical ingredients. Adequate health and safety precautions should be observed during storage, handling, application and curing. Keep away from sparks, heat and open flame and use necessary safety equipment such as air mask, non-sparking tools and ladders, etc. When working in tanks, rooms and other enclosed spaces, adequate ventilation must be provided. Keep out of reach of children.

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Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Ultracote Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.

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