ULTRAMASTIC 14 EP

(Coal Tar Epoxy High Build)

(Paints & Coatings) **HEAVY DUTY, HIGH PERFORMANCE**

GENERIC CLASS: Coaltar epoxy coating in two pack forms with a modified curing agent.

PRODUCT DESCRIPTION: Ultramastic 14 EP is a special modified coaltar epoxy coating catalyzed by a unique polyamide type activator which conforms to the Bureau of Ships Specification Mil-P-23236, type I & II, Class II. It is designed to provide a dry film thickness of up to 12 mils (300 microns) per applied coat. Ultramastic 14 EP features superior edge covering without sagging, pinholing or mud cracking. Its outstanding adhesion and excellent curing under adverse conditions of low temperature and high humidity. This coating is extremely resistant to salt and fresh water and has excellent resistance to most acids and corrosive chemicals. It is self-priming on most surfaces.

TYPICAL USES: Ultramastic 14 EP may be considered as protective lining for concrete and steel, storage tank, pipings and processing equipment, handling fresh and salt water, water solutions containing salts, detergents, alkalis and many other chemicals. Ultramastic 14 EP is recommended for buried pipe, sewage plants, refineries, pulp and paper industries, off-shore drilling platforms, marine service, dam gates, mining and chemical plants.

LIMITATIONS: Not suitable for immersion service in aromatic or ketone solvent, strong oxidizing acids.

TEMPERATURE RESISTANCE: (Dry Basis)

Sustained	:	200ºF (93ºC)
Intermittent	:	250ºF (121ºC)

WEATHERING: Very Good (Chalks)

CHEMICAL RESISTANCE GUIDE:

Exposure	Immersion	Splash & Spillage	Fumes
Acids	Very Good	Excellent	Excellent
Alkalis	Very Good	Excellent	Excellent

CHEMICAL RESISTANCE GUIDE: (Cont.)

Exposure	Immersion	Splash & Spillage	Fumes
Solvents	Good	Excellent	Excellent
Salt	Excellent	Excellent	Excellent
Water	Excellent	Excellent	Excellent

FLEXIBILITY: Good, ½" Bend Zuhr Conical Mandrel.

ABRASION RESISTANCE: Very Good. 108 milligrams loss average, 1,000 cycles, taber CS-17 wheel, 1,000 grams weight.

SURFACE HARDNESS: Very good. Konig pendulum hardness of 35 seconds (glass standard = 250 seconds); Din standard 53,157.

THERMAL SHOCK: Unaffected 5 cycles - 70ºF to 200ºF.

CONSISTENCY: Thixotropic

SUBSTRATES: Apply to properly prepared steel or others as recommended.

COMPATIBILITY: Coating is self-priming. May be applied over catalyzed epoxies, inorganic & organic zinc primers and others as recommended.

SUGGESTED TOPCOAT: Normally none required. May be topcoated with Ultracote anti-fouling paints as directed. May be topcoated also with black gloss epoxies. Coaltar bleed through is likely with most topcoats. If topcoated, apply one pass of tie coat before final coat.

CALCULATED VOLUME SOLIDS:

Ultramastic 14 EP	78%±2%

RECOMMENDED DRY FILM THICKNESS PER COAT:

8 - 12 mils (200 - 300 microns)

CALCULATED COVERAGE PER MIXED GALLON:
1,251 sq. ft. per mil (31 sq. m./ li. @ 25 microns)
156 sq. ft. @ 8 mils (3.84 sq. m./ li. @ 200 microns)
125 sq. ft. @ 10 mils (3.07 sq. m./ li. @ 250 microns)
104 sq. ft. @ 12 mils (2.56 sq. m./ li. @ 300 microns)

SHELF LIFE: 12 months. Material on stock should be turned upside down every 3 - 4 months.

COLORS: Black & Brownish Red.

FINISH: Flat and semi-gloss. (Gloss is obtained per order.)

COMPONENTS: Two (Parts A & B)

FLASH POINT: (Pensky-Martens Closed Cup)

Ultramastic 14 EP	68ºF (20ºC)
Ultramastic Thinner	73ºF (23ºC)
Ultramastic Thinner # 15	77ºF (25ºC)

SURFACE PREPARATION: No more surface preparation than can be coated in the same working day should be performed. Round off all sharp edges and rough welds. All burrs, weld spatter, loose concrete, masonry and wood should be completely removed. Concrete and masonry should cure at least 30 at least 30 days and have a moisture content prior to coating below 8%. All surfaces must be clean, dry, free of any dirt, dust, chalk, grease, oils, salts, curing compounds, release agents, preservatives and other deleterious materials before application is performed.

CARBON STEEL: It is recommended for immersion service or severe exposures that metal surfaces be prepared in accordance with SSPC-SP-10 or NACE # 2 as minimum surfaces preparation requirements. For atmospheric or mild exposures, metal surfaces may be prepared in accordance with SSPC-SP-6. Prepared metal surfaces should have an anchor profile of not less than 2 mils (50 microns) as measured by use of a non-destructive instrument such as a Keane-Tator surface profile compactor.

ALLOY STEELS AND NON-FERROUS METALS: Chemically clean surfaces in accordance with SSPC-SP-1 (Solvent Cleaning). Abrasive “brush” blast to provide a lightly profiled and each surface.

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.

MIXING: Stir separately, then combine and mix very thoroughly before use and occasionally during application.

MIXING RATIO: 1:1 ratio by volume with Ultramastic Thinner or Thinner # 15.

THINNER: Thin up to 20% by volume with Ultramastic Thinner or Thinner # 15.

POT LIFE: Four hours @ 75ºF (24ºC). Pot life is proportionately shorter at higher temperature or in larger quantities and longer at lower temperatures or smaller quantities.

APPLICATION TEMPERATURES:

Material	:	55-90ºF (13-32ºC)
Surfaces	:	50-120ºF (10-49ºC)
Ambient	:	50-119ºF (10-48.3ºC)
Humidity	:	0 - 85%

Application at air and surface temperatures lower than 119ºF and above 50ºF and more than 5ºF (2ºC) above due point is suggested. If it is necessary to apply this product at temperatures or humidities beyond these preferred limits, contact Ultracote Technical Representative for additional information, instructions and explanations before proceeding.

SPRAY: Use sufficient air volume for correct operation of equipment. Use 50% overlap with each pass of the gun. On irregular surfaces, coat the edges first, making an extra pass later. To obtain 16 mils (400 microns) dry film in one coat, apply in even parallel passes with 50% overlap, immediately followed by additional cross-spray passes to obtain proper thickness.

EQUIPMENT: The following equipment has been found suitable, however, equivalent equipment may be substituted.

CONVENTIONAL SPRAY: Standard equipment such as Binks or equal using a pressure material pot with mechanical agitator, equipped with dual regulators and air gauges. Binks No. 18 gun (External Mix), 67 fluid nozzle, 65 fluid needle, 67 PB air cap, heavy duty fluid spring and teflon fluid spring and teflon fluid packing, ½" I.D. or larger air supply line. Operating air source capable of providing a minimum of 20 cfm at 80 psi to each nozzle and 60 psi to the pot is required.

AIRLESS SPRAY: Standard equipment such as Graco or equal using 30:1 or higher pump ratio. Graco 206-718 gun having fluid tip of .021" or larger office size with Reverse-A clean tip, 3/8" I.D. or larger high pressure and solvent resistant fluid line, ½ "I.D. or larger air supply. Operating air source capable of providing 80 to 100 psi in bound pressure at the pump.

BRUSH OR ROLLER: Short hair or natural bristle brush only or short nap roller.

DRYING TIME:

To touch	:	2 hrs. @ 90ºF (32ºC)
To handle	:	3 - 4 hrs. @ 90ºF (32ºC)
To recoat	:	3 - 4 hrs. 90ºF (32ºC)
Final Cure	:	5 Days

CLEAN-UP: Use Ultracote thinner #2 or toluol. or xylol.

STORAGE CONDITION:

Temperature	:	45-110ºF (7-43ºC)
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.

WARRANTY & LIMITATION OF SELLER'S LIABILITY: Ultracote Paints and Coatings Corporation, warrants only its paints represented herein meet the formulation standards of Ultracote Paints and Coatings Corporation.

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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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