



KK#2

KLEAR KOTE

TECHNICAL & PHYSICAL CURE DATA

KLEAR KOTE RESIN:

Viscosity in cps, ASTM D 445 @ 25 C (77 F)	11 - 14000
Epoxide Equivalent Weight	180 - 195
Color, Gardner, Max	3
Specific Gravity	1.15 - 1.17
Density, Lbs/Gallon	9.6 - 9.7

TYPICAL PROPERTIES OF UNFILLED CASTINGS OF KLEAR KOTE RESIN CURED WITH KLEAR KOTE HARDENER

Resin/Curing Agent (Hardener) blend ratio	1:1
Brookfield Viscosity, cps - 25 C	2,740
Gel Time, Minutes (200 g Mass)	40
Peak Exotherm Temperature,	31.8 C
Drying time, Hours:	
Set to Touch	3.2
Surface Dry	5.9
Thru Dry	10.0
Shore D Hardness	98 - 100
Compressive Strength, PSI at Yield	6611
Compressive Modulus, PSI x 10 ⁵	1.72
Flexural Strength, PSI at Yield	5016
Flexural Modulus, PSI x 10 ⁵	1.26
Tensile Strength, PSI at Yield	2975
Tensile Modulus, PSI x 10 ⁵	1.18
Elongation % at Yield	5
Elongation % at Break	80

Sea Hawk Paints

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KLEAR KOTE

KK#3

HOW TO PREPARE AND MIX

1. PREPARATION:

For decoupage applications the Klear Kote and objects to be coated should be stored at room temperature (75 - 80 F) for 24 hours prior to use.

Mixing containers should be free of all contaminants, dry and wax free.

The mixing area should be dry and humidity of 50% or less offers the best results to prevent an oily surface.

All surfaces should be dust free and dry. Porous surfaces need to be primed with a thin coat of Klear Kote to prevent air escaping the surface to form bubbles.

2. MEASURE:

Measure exactly 1 part resin to 1 part hardener.

3. MIX:

Mix the resin and hardener in a clean dry container. Mix well until the materials are thoroughly blended, two to three minutes. Make sure the side walls and bottom are blended into the mix thoroughly.

Improper mixing and measuring will result in soft spots or a tacky surface.

4. POUR:

Pour as soon as the product is thoroughly mixed. Thin films will need a 24 hour cure, overnight at room temperature.

5. COVERAGE:

One (1) gallon of mixed Klear Kote will cover 32 square feet at 80 F.

6. CLEAN UP:

Before the Klear Kote has cured, Acetone may be used to clean tools and metal mixing equipment.

Caution: Acetone is Flammable and should be used in well vented areas only. Explosion proof electrical equipment must be used for automated operations. Do not use open flame or equipment not grounded. Do not smoke in work areas using Acetone as a clean up solvent.

KLEAR KOTE

KK#1

DESCRIPTION:

Klear Kote is a clear general purpose epoxy resin and hardener. The resin and hardener mix and cure in a one-to-one (1:1) part ratio. One part of resin is mixed thoroughly with one part of hardener, prior to pouring or application. Neither resin nor hardener can be used alone and strict measurement in mixing is essential in obtaining physical cure characteristics.

The Klear Kote Hardener is a high purity proprietary blend of epoxy curative agents and accelerators. It has been stabilized to remain clear and water-white for a shelf-life of six (6) months or longer. The Klear Kote Resin is a high purity, undiluted epoxy resin. All epoxy materials included in Klear Kote meet Federal and/or industry specifications for the several applications described below.

APPLICATIONS:

DECOUPAGE: Use as decorative coating on wood, plastic, plaster, paper, metal, ceramic surfaces, cloth & stone. Use to repair and restore (gloss) Chattanooga Stone Epoxy surfaces. Use as decorative coating for table and bar tops, clocks and plaques. It is suitable for casting valued objects, where thin or multiple coatings are applied.

ADHESIVES: Blend (fill) with fumed silica (Cab-O-Sil) (8-10% by volume), micro-spheres, talc, cornflower or baking flour to thixotropy desired. Use as general purpose marine epoxy glue (fairing putty, sealer, top coat, etc.) Use as all purpose household and industrial glue.

CONCRETE REPAIR/SEALING: Fill cracks, seal and waterproof all types of concrete. Use where forklift and other hard use is anticipated.

LAMINATES & COMPOSITES: For repairs, use Klear Kote to wet out fiberglass (cloth, mat, tape) woven-roven, kevlar, and or styrofoam. Repair or build structures where toughness, flexibility, and "no shrinkage" are desired results. Use to reinforce composites (glass, graphite, synthetic).

PIGMENTED COATINGS: Compound with titanium dioxide, black oxide and/or epoxy colorants to create a long wearing coating for wood, plastic and concrete surfaces.

ENCAPSULATION, POTTING AND MOLDING: Use Klear Kote to build long lasting molds for production. Klear Kote is suitable for many electrical potting and encapsulating applications.

TOXICITY & SAFETY:

Klear Kote, in liquid or an uncured state, should be considered hazardous. It has the potential to cause burns to the skin and eyes, and toxic effects caused by absorption through the skin or by swallowing. Chemical type goggles and impervious gloves must be worn when handling these products. Protect skin from direct contact with Klear Kote, until such time as the product has cured. Cured materials are not hazardous or toxic. Cured wastes (solids) may be disposed of in regular refuse. Uncured hardener materials must be disposed of in strict observation of Federal, State and Local regulations governing hazardous and toxic wastes.

ESTIMATING COVERAGE

1 gallon of mixed epoxy contains 231 cubic inches of volume; therefore will cover approx. 1.6 square feet at 1 inch thick and approx 6.5 square feet at ¼ inch thick. Coverage must include surfaces , edges, and an extra 2%for run off on the edges.

SURFACE PREPARATION

Although it is not possible to address every type of surface the following is a generic guideline: Bare wood should be sealed with a thin coat of epoxy, decoupage articles should be tested for color fastness prior to application. When recoating an existing coating the coating should be scuff sanded and cleaned with a cleaning solvent. Denatured Alcohol or Isopropanol 99% are recommended. Be sure that the surface and the epoxy to be mixed are at the same temperature. Preferably 75-85 deg.F.

MIXING

Mixing is the most important part of the project. Improper mixing will cause soft or tacky spots in the surface.

First be sure you are preparing to mix containers of Hardener and Resin, believe it or not mistakes happen, check the labels.

Graduated mixing containers are recommended for measuring and mixing. Hand mixing with a paint type stir stick is recommended, mixes should not exceed 1.5 gal. Continual mixing including sweeping the sides and bottom of the mixing container while mixing should take approx 3 minutes. The product may cloud a little during mixing but will clear as mixing nears completion. It is important to mix without inducing air. After mixing is complete, allow the mix to stand 3-5 minutes and remix for approx.30 seconds. The completed mix should then be poured into a separate container for the final pour. The reason for this is that no matter how complete the mix is, there are unmixed portions on the sides and bottom of the mixing container.

APPLICATION

Epoxy is self leveling, therefore the surface must be level for uniformity. The epoxy may be poured on the surface and spread with a plastic hand squeegee or a dust free foam brush. It is not recommended to apply more than 1/8 inch thick per coat. Thick films are achieved through multiple coats.

Once the epoxy is applied to the desired thickness tiny air bubbles will appear on the surface. The bubbles need to be eliminated by passing the flame of a propane torch systematically over the surface keeping the flame at least 3 inches from the surface. The same technique can be used with a heat gun. It will be necessary to repeat this process until the bubbles stop surfacing. You will now have a glass like surface.

CURE TIME

Cure times will vary with temperature and thickness. Whitaker Klear Kote will be tack free in a 1/8 in film at 77deg,F in approximately 8 hours and ready for service in 24 hrs.

Important note: Even though the film will appear hard the epoxy will not reach full cure for 14 days. **Therefore**, do not leave objects on the surface until fully cured. When used for bars or table tops any hot items like coffee cups hot plates etc. over 140deg.F will leave a ring or impression on most any epoxy. The use of saucers under cups and heat resistant pads under hot plates are recommended to preserve the finish.

IMPORTANT NOTES ABOUT EPOXY

Epoxies cure through chemical reaction. The chemical reaction generates heat, the greater the mass of epoxy the faster the reaction occurs .

Pot life is measured with about 4- 0z. of epoxy @ 77deg.F. Therefore a stated 40 minute pot life is for that 4 ounces. A 1.5gal mix in a bucket will only have a 10-15 min pot life.

Epoxies will amber slightly when exposed to sunlight, even for only several hours and will chalk in exterior applications. For exterior application a top coat with a UV inhibited Urethane is recommended.

Blemishes caused by contaminants or suicidal insects can be sanded out and recoated without ruining clarity.

If this is your first experience with Epoxy-EXPERIMENT ON A SIMILAR SURFACE before making a big mistake. Even the pro's have bad days...