



**Specialized Thin Film
Protective Metal Coatings
and Dry Film Lubricants**

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**2400 Series Protective Finishes
Technical Data Sheet**

The **2400 Series** is a hard, abrasion resistant coating which meets or exceeds all military and aerospace specifications for protective coatings. With a pencil hardness of greater than 9H, the 2400 Series will provide a 180-degree bend without any coating loss. The 2400 is formulated to provide excellent impact resistance, lubricity (meets military dry firing specifications), heat dissipation, chemical resistance, corrosion protection, durability and scratch resistance. The cured coating will not attract dirt or dust. The 2400 Series coatings can be sprayed and formulated for dip-spin application and also to meet specific customer's needs.

Marketed under the trademarked name **Gun Kote**, it is an outstanding general-purpose coating for use in the sporting goods, construction, and for general light to heavy industrial equipment. Gun Kote can also be custom formulated to meet specific needs for extra lubricity, corrosion or durability.

Gun Kote 16/2 Flat Dark Earth (2404F) is specified by the U.S. Military for use on SOCOM Special Sniper Weapons (SPR's) in 2003. The 2404F continues to be specified for most new special weapons.

COVERAGE 600 to 800 square feet per gallon

THICKNESS Maximum = .0003 to .0004 +- .0001

PRE TREATMENT:

- Stainless Steel: Grit blast (all blasting should be done using aluminum oxide 120 mesh at 40 to 60 pounds of pressure.)
- Alloy Steel: Sandblast and phosphate or sandblast only.
- Aluminum: Alodine or anodize if possible, if not possible use grit blast at lower pressures of 20 to 40 psi.
- Nickel Or
- Chrome Plating: Grit blast (If plating peels it is poor plating and will have to be taken completely down to bare metal.)

Parts are first stripped and cleaned of any oil or grease (use KG-3 Solvent Degreaser or solvent that does not leave a residue). After sandblasting, repeat cleaning/degreasing to remove all residue from the surface and from any holes that may have trapped the blast material.

THINNING If thinning is required use MEK or Ethel Alcohol in small amounts. Gun Kote is formulated and packaged ready to spray.

CLEAN UP MEK or Acetone.

CURING

Coating will be fully cured after one hour. Bake temperature is 325F. Timing starts after part has reached curing temperature. Coating will dry to the touch within a few minutes. Temperatures can vary with longer in-oven times for example 275 degrees for two hours. Some colors that contain a yellow pigment are best cured at lower temperatures.

Gun Kote cured at higher temperatures (325 to 350) for 90 minutes will become slightly harder. Some loss of gloss may occur at high cure temperatures.

COLORS

The 2400 Series is available in several colors including: Black, Gray, OD Green, Stainless Steel, Service Brown, Tan, Silver, Gold and Clear. (Some colors available in Flat) Premium custom colors and or formulations are also available.

APPLICATION

Preheat parts to be coated to 100 to 120F to reduce the chance of runs. When handling any part, use a pair of powder free, clean, latex gloves to insure you do not leave any fingerprints. Fingerprints will affect the bonding of the material to the metal. Using a good quality air gun or airbrush, spray in light fog passes, 8 to 10 inches away from the part you are coating. Spray from four to five different directions to assure complete coverage. Air pressure should be 20-30 psi. Too much air pressure will cause a rough finish.

The ideal coating thickness is .0003 to .0004 of an inch, which should not cause any problems to close tolerance fits. After curing, while part is still warm, use oil to wipe the part down. This is especially important with flat finishes and will minimize burnishing marks which are common with flat finishes.

Types of Spray Guns:

HVLP touch up guns with medium to fine tips and set to manufactures recommendations to start. You must experiment with the material control and fan control for best results and to obtain proper sheen of finished coating.

If coating is not to your satisfaction at this time, it can be removed with Acetone, Alcohol or MEK. To re-coat simply repeat the process.

After allowing the coating to dry, hang parts in an air-circulating oven and bake for at least 1 hour at 325F. Bake time starts when parts reach the curing temperature.

Technical General:

Outstanding corrosion protection up to 1000 salt spray tests at 5% salt. Tests performed for Armscor by the South African Navel Logistics Dept. showed **Gun Kote** withstanding an equivalent of a 7-year exposure. (Tests were performed on Aluminum in a salt spray chamber with 50/50 on/off time at 35 degrees C.)

Technical General Continued:

Meets or exceeds Military requirements to "Resistant to Chemicals" such as, Aviation Gasoline, Grade 115/145, Jet Fuel, JP-4, Lubrication Oil, Hydraulic Fluid, Non-petroleum, Paint Remover, Epoxy Systemlene, Nitric Acid, Hydrochloric Acid, Hydrogen Peroxide, Ammonia Hydroxide, Sodium Hydroxide NaOH, Sulfuric Acid H2SO4 3%, Sodium Bisulphide, NaHS 3% and Alkaline Cleaner, Highly Chelated (ANN-RO #101).

Outstanding heat dissipating qualities.

Outstanding temperature variation (500 to 800 degrees F and as low as - 300 degrees F with suitable pigments)

Outstanding lubrication qualities (can be formulated to meet most release specifications).

APPLICABLE DOCUMENTS

ASTM D-1654-61	Corrosion Protection
ASTM D-870-54 DI	Water immersion
FTM 151A	Accelerated salt spray (fog)

REMOVAL

To remove coating prior to curing use MEK or Acetone; after curing grit blast with 120-grit aluminum oxide.

USES

1. Exterior of weapons (including clips) of all types from handguns to G5 and G6 heavy artillery and bomb casings.
2. Engine blocks and heads to dissipate heat.
3. Engine water jackets and water pumps to act as a barrier between dissimilar metals.
4. Protection from corrosion while helping to transfer heat and coolant.
5. Transmission cases and rear end housings to transfer heat from housings.
6. Radiators, Oil and Transmission Coolers, to dissipate heat.
7. Outboard Motors
8. Motorcycles including external and internal motor parts
9. Boat Cleats and other marine hardware