



**Protective Metal Coatings**  
**Dry Film Lubricants**  
**Performance Ceramic Coatings**  
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## **New KG 1200 V2.0 Series Data Sheet** **One Part Water Based/Ambient Cure**

### **Description:**

KG's improved Air Cure 1200 V2 is a **single** component, water based, modified proprietary polyurethane resin system. The coating has been improved for easier spraying. The V2 1200 is less inclined to run, and will decrease sagging. The 1200 V2 has greater heat stability, chemical resistance and increased wear properties while maintaining a cure time of about 90 minutes (@ 70 degrees ambient temperature with low humidity). The 1200 V2 has excellent UV resistance and can be used in an array of industries with wide use now in the Sporting Good and Automotive Industries. The 1200 V2 can be used as an excellent clear coat over hydro dip designs with gloss ratings of up to 80 measured @ the 60 degree angle.

The 1200 V2 is especially good for solvent sensitive substrates and where zero VOC applications are needed. It has excellent adhesion properties, bonding well to a wide range of substrates including metal, plastic, rubber or foam while maintaining complete flexibility. Most impressive is substrates may not need to be profiled to assure adhesion.

Number of Coats: 2-4 Generally. More coats can be applied depending on tolerance requirements.

Recommended Minimum DFT 12 to 16 Microns or higher depending on number of coats.  
(Thicker film thickness will cause adhesion problems.)

Coverage: 700 to 900 sq ft.

Pencil Hardness: >9H

Solids: 22%

Chemical Resistance: Good (Allow a minimum of 48 hours for best chemical resistance).

Durability/Wear: Excellent

Heat Stability: Good (stable to 325F)

Dry Time @ 75 F., 50% R.H.:

Set to Touch: 15 min.

Dry to Touch: 30 min.

Fully Cured: 80 min

Cure times can be accelerated by subjecting parts to about 100F for 20 min. Dry and Cure times are dependent on humidity levels. Care should be taken with Time and Temperature. Overheated 1200 will cause gloss levels to rise.

Thermal Stability: 325

Minimum Application Temp.: 65 degrees F

Thinner: Water

Clean up: Water

Shelf Life: One year if unopened and sealed tight. (Date of shipping)

Salt Spray: Depends on substrate material and base coats (100 Hours)

Humidity Resistance: 100F, 100% RH 700 Hours .5 mil DF Cold Rolled Steel 7 Days

Rusting ASTM D610 No Effect

Blistering ASTM D714 No Effect

**Chemical Resistance:**

1 Hour Submersion	
Toluene	No Effect
MEK	50 Double Rubs No Effect
Alcohol	If submerged will attack film

**Surface Preparation:**

**Note:** Generally plastics and anodized aluminum will only need to be degreased and not have to be grit blasted. Most all other metals will have to be grit blasted. First degrease (flush) all parts to assure all contaminates/oil/dust is removed. KG 1200 v2.0 has excellent adhesion properties and substrates may not have to be profiled to achieve adhesion. To decide if parts need to be profiled, spray and test a small sample piece. If blasting is necessary prepare the parts by abrasive blasting with 120 grit aluminum oxide at 40-60 psi. For plastics 20 to 30 psi and if blasting anodized aluminum to remove a finish, reduce the air pressure sufficiently to remove any finish but not remove the anodizing.

**Application Metal:**

Thinning is not required; use DI water or regular tap water if you prefer to thin it. Standard Air Brush or similar equipment is recommended. Spray equipment atomizing pressure should be set to recommended settings for water, approximately 30 to 40 psi. The first coat and all subsequent coats need to be applied to a warm part (100-120F). Spraying the 1200 V2 heavy **will** cause the coating to peel.

All coats must be applied with uniform light, fog passes. For best results, parts should be warmed prior to spraying each coat. The use of a heat gun or hair dryer works well to keep the part warm while spraying. Simply, warm the part, spray the first light coat, warm the part, spray the second coat etc etc. Keeping the part warm is the key in achieving a first class finish.

**Coating Plastics and Rubber:**

Most plastics molds use silicon or other release agents. Any remaining release agent residue on parts **will** cause the coating to peel. Testing a small area is highly recommended. If there is a release agent present use a quality silicone remover or a butane torch. Quality silicone removers can be found at any automotive parts supply store. If using a torch hold the flame 10 to 12 inches from the part. Make several quick passes over the substrate to leach the release agent out from the plastic. The part needs just enough heat to bring the release agent to the surface which you will be able to see. High heat will damage most all plastics. Once the release agent is seen leaching wipe the substrate with a solvent that will not attack the plastic you're working with.

**Clean Up:**

As soon as possible after spraying and before coating has dried on equipment, clean up with water. If coating is allowed to tack up it may be necessary to clean with a solvent such as MEK and allow the equipment to soak. Having a large can of water to put the spray gun in makes for good habit and better finishes.

**Precautions:**

Although this is a water-based material, spray atomized droplets/mist should not be inhaled, Use adequate ventilation. In confined areas, use adequate forced ventilation during application. When spraying, a suitable protective vapor/particulate respirator such as #8709 manufactured by 3M Co. should be worn. In areas of minimum air movement, a fresh air mask such as #W292 manufactured by 3M Co. should also be used. Refer to the MSDS for detailed precautions.