



product  
information

## MUSICAL INSTRUMENT COATING

U4UA-CLE04

UV CURABLE GLOSS URETHANE TOPCOAT

Cardinal's U4UA-CLE04 is a solventborne one component UV curable gloss urethane topcoat. This finish is designed to finish musical instruments and other sealed wood products. It is a high solids low VOC material that leaves a beautiful glossy finish.

### TYPICAL USES:

- Fine musical instruments

### BENEFITS:

- UV curable
- Fast Tack Time
- Adhesion
- Ease of Application

### CURED FILM PROPERTIES:

Testing was conducted on a variety of different wood types which had been sealed with the U4UA-CLE02 and filled with U1PA-FE02.

### APPLICATION:

#### SPRAY

1. Prepare the wood to accept the sealer by sanding with 220-320 grit sand paper and wipe clean using acetone.
2. Scuff Sealer and apply filler to product specifications.
3. Reduce with Acetone if desired.
4. Apply finish with a fine finish spray gun setup using the necessary amount of atomizing air pressure to form a fine spray.
5. Recommended spray gun settings would be 6" fan approximately 9"-12" from the substrate.
6. Apply the finish with an overlapping spray technique two times for one coat.  
Avoid getting the gun too close to substrate to prevent air entrapment (bubbles)
7. Apply approximately 1.0-3.0 dry mils (2.5-5.0 wet mils).
8. Allow to flash for 10 minutes before UV curing.
9. Depending on Light intensity cure the finish following the cure conditions listed.
10. Once cured the finish is complete and can be worked.

### REPAIR: IN DEVELOPMENT.

### Note:

These recommendations are only a suggestion and do not imply that other products and techniques currently being used won't work. All procedures and materials used must be tested and approved by the applicator.

**TYPE:** Solventborne UV Gloss Urethane

**COMPONENTS:** One

**COLORS:** Clear

**GLOSS:** Gloss

**MINIMUM ORDER:** 5 gal. of U4UA-CLE04

**COVERAGE:** At 1.0 mil DFT, 65% transfer efficiency(TE) is 590 ft<sup>2</sup>/gal.

Calculation: 1604 ft<sup>2</sup>/gal x % volume solids x TE ÷ DFT

**VOC EXCLUDING MIXED** 175 grams/liter = 1.46 lbs/gal

**VOC INCLUDING MIXED:** 125 grams/liter = 1.0 lbs/gal

### SOLIDS:

Weight ..... 61%

Volume..... 57%

**FLASH POINT:** -4°F TCC

**SHELF LIFE:** 6 months from date of manufacture in factory sealed container.

**VISCOSITY:** 25-30 seconds in Zahn #2

**SPRAY-able Pot Life:** NA

**RECOMMENDED DFT:** 1.0 – 3.0 mils

(depending on required finish)

**CURE:** Air Dry

Tack free 10 min.

Time to Cure 10 min.

Cure conditions: 2 minutes

UVA 3.18 J

UVB 1.80 J

(At 1.0 mils dry film thickness, 78° F, 50% RH)

This coating must be used  
only in a well ventilated area!

Keep this coating away from  
any and all sources of  
ignition!

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**SURFACE PREPARATION AND SEALING:** The most important steps in a successful coating process are cleaning and sealing. The wood surface should be free of any dust or dirt before application of sealer. If a pore filler is being used the the

**Cleaning the substrate:** The surface of wood should be cleaned with either acetone or Mineral spirits to remove any oils, grease or other contaminants. The surface must be thoroughly dry before painting. Air quality regulations have limited the allowable emissions from cleaning operations.

Plastic — Any vinyl or other plastic products that might be coated over with this finish should have the adhesion verified before use.

**SEALER SELECTION:**

PRODUCT NO.	DESCRIPTION	FUNCTION
U4UA-CLE02	Dual Cure Sealer	Sealing the wood surface to accept a top coat or fillers.

**RELATED PRODUCTS:**

PRODUCT NO.	DESCRIPTION
U1PA-FE02	UV curable gel pore filler
1000-13	Exempt Reducer
1600-02	Medium Urethane thinner
1600-03	Slow Urethane Reducer

**TROUBLE SHOOTING:**

PROBLEM	CAUSE	REMEDY
Blisters, pin holes or solvent pop	Water contamination. Entrapped air. Entrapped solvent	Eliminate water – Check airlines. Increase atomization, decrease film build. Pull gun further away from substrate
Craters	Contaminated ambient air, e.g., silicone mist, dust.	Locate and eliminate source of contamination.
Fish-eyes	Substrate contamination.	Clean and prepare substrate.
Blushing	Humid conditions.	Use Cardinal's 1200-11 lacquer thinner or add anti blushing additive.
Poor adhesion	Improper surface preparation.	See surface preparation section.
Gloss variation	Variation in application, cure schedule and humidity.	Consistent gloss depends upon consistent process.

**APPLICATION EQUIPMENT:** Most air quality regulations require the paint application transfer efficiency to be 65% or better. This generally means using electrostatic or high volume low pressure (HVLP) spray guns. Otherwise, conventional pressure feed, airless or air assisted airless spray equipment can be used. Air supply lines need water and oil traps.

**EQUIPMENT CLEAN-UP:** Clean up should be done as soon as possible keeping in mind the pot life of the mixed paint. Air quality regulations have limited the allowable emissions from cleaning operations.

**PRODUCT LIMITATIONS:**

- This U4UA-CLE04 was design for fine musical instrument and the normal environmental condition that they would be exposed. All precautions should be taken to avoid extreme conditions such as: excessive heat, extended cold temperatures, chemicals which would damage coating or excessive abrading with guitars strap and other abrasive objects.

**SAFETY:** Refer to the product's Material Safety Data Sheet (MSDS) for complete safety information. Contains organic solvents. Use with adequate ventilation. Do not breathe vapors or spray mists. If component TLVs are exceeded, a NIOSH approved air supplied respirator is advised. See MSDS for TLV information.

Contents are FLAMMABLE. Keep from heat, sparks or open flame.

Allergic reactions are possible. Avoid use by persons with respiratory problems.

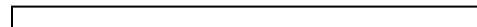
Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

**FIRST AID:**

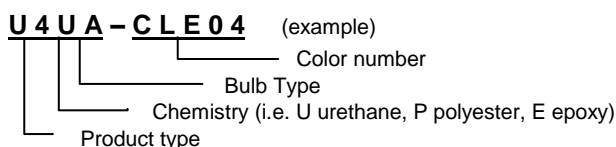
Eye contact: flush immediately with plenty of water for at least 15 min. and get medical attention.

Skin contact: wash thoroughly with soap and water for 5 minutes.

If swallowed, do not induce vomiting and get medical attention immediately.



**PRODUCT IDENTIFICATION**



D14TL

**IMPORTANT: Warranty and Disclaimer —** The performance characteristics of these products vary according to product application, operating conditions, materials applied to or with and use. Since these factors can affect results, we strongly recommend that you make your own test to determine to your satisfaction whether the product is of acceptable quality, has not been affected by storage or transport and is suitable for your particular purpose under your own operation conditions prior to using any product in full scale production. Seller warrants the products to be free from defects in materials and workmanship. SUCH WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE. No representative of ours has authority to waive or change this provision, which applies to all sales of these products.