



product  
information

**MUSICAL INSTRUMENT COATING**  
U4UA-CLE15-6  
UV CURABLE SATIN GLOSS URETHANE ACRYLATE

Cardinal's U4UA-CLE15-6 is a solventborne UV curable urethane acrylate satin finish. This product exhibits a smooth satin finishes, reduced burnishing resistance, ease of application, fast tack time and good cure speed.

**TYPICAL USES:**

- Fine musical instruments

**BENEFITS:**

- Fine Satin Finish
- Fast Tack Time
- Burnish Resistance
- Ease of Application

**CURED FILM PROPERTIES:**

Testing was conducted on a variety of different wood types which had been sealer and basecoated with U4PA-CLE22 and topcoated with U4UA-CLE15-6.

TEST	METHOD	PARAMETERS	RESULT
Adhesion	ASTM D3359	Cross-hatch tape	0% failure
Hardness	ASTM D3363	Pencil	5H-6H
Humidity	ASTM D2247	50 hrs	No effect

**APPLICATION:**

**SPRAY**

1. Prepare basecoat of gloss clear to accept satin finish by sand with 600-800 grit sand paper.
2. Apply finish with a fine finish spray gun setup using the necessary amount of atomizing air pressure to form a fine spray.
3. Recommended spray gun settings would be 6" fan approximately 9"-12" from the substrate.
4. Apply the finish with an overlapping spray technique two times for one coat. Avoid getting the gun to close to substrate to prevent air entrapment (bubbles)
5. Apply approximately 0.75-1.0 dry mils (5-10 wet mils).
6. Allow to flash for 10 minutes before UV curing.
7. Depending on Light intensity cure the finish following the cure conditions listed.
8. Once cured the finish is complete.

**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 Urethane Acrylate

**COMPONENTS:** One

**COLORS:** Clear

**GLOSS:** Semi Gloss 15-18°

**MINIMUM ORDER:** 1 gal. of U4UA-CLE15-6.

**COVERAGE:** At 1.0 mil DFT, 65% transfer efficiency(TE)  
Is 223 ft<sup>2</sup>/gal.

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

**VOC MIXED:** 472 grams/liter = 3.93 lbs/gal excluding.  
208 grams/liter = 1.73 lbs/gal including.

**SOLIDS:**

Weight ..... 25%  
Volume ..... 20%

**VISCOSITY:** 18-20 seconds in Zahn #2

**SPRAY-able Pot Life:** NA

**RECOMMENDED DFT:** 0.75 – 1.0 mils  
(depending on required finish)

**CURE:** Air Dry

Tack free 3 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 surface should be cleaned, sanded and sealed before applying U4UA-CLE15 or other Cardinal recommended product.

**Cleaning the substrate:** The surface of wood should be cleaned with either acetone or Minera I 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
6759-CLE19669	Urethane Isolante Sealer	Sealing the wood surface to accept a top coat or fillers.

**RELATED PRODUCTS:**

PRODUCT NO.	DESCRIPTION
U1PA-FE02	UV curable gel pore filler
U4PA-CLE22	UV Curable Styrene Polyester Gloss Clear
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.

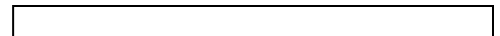
**PRODUCT LIMITATIONS:**

- This U4UA-CLE15 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.

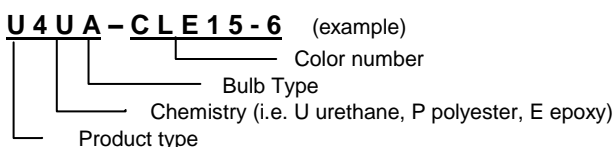
**SAFETY:** Refer to the product's Safety Data Sheet (SDS) for complete safety information. Contains organic solvents. Use with adequate ventilation. Do not breathe vapors or spray mists. If component TLVs are exceeded, a NIOSH approved air supplied respirator is advised. See SDS for TLV information.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



A17TL

**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.