



UVEXS Incorporated

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The brightest ideas in UV curing

460B

UV Curable Hard Coat

DESCRIPTION

A durable protective coating with exceptional clarity for decorative glass, metals and some plastics. Rapidly cures when exposed to high intensity UV energy, forming a tough, mar resistant barrier to scratches and scuffing. The single part formula contains no solvents. Excellent as a replacement for conventional air-dry acrylics and urethanes where rapid processing can benefit throughput. May be applied as a thin coat or encapsulating dome. Compatible with conventional dispensing equipment specified to handle UV curable products. The clear coating may be tinted using a pigmented series of concentrates to create decorative coloring effects. A standard proportion range for the concentrate allows for varying the percentage to achieve the desired color density.

CURE SCHEDULE

Expose with a medium pressure mercury vapor type lamp operating at a minimum of 200 watts per inch input power:

Minimum required intensities: 50 mW/cm² @ 254 nm
 160 mW/cm² @ 365 nm

Exposure time: <10 seconds, depends on application thickness

Curing systems with intensities less than specified may require inert atmosphere blanketing and longer duration exposure. Additional exposure time may be necessary when concentrates are used with the coating.

UNCURED PROPERTIES

Base resin: acrylated urethane
Solids: 100%, no solvents
Components: one
Color: clear to light amber
Flash point: >200°F
Specific gravity: 1.02
Viscosity: 720 cps*

* 23°C, Brookfield model LVF, spindle 3, 60 RPM

CURED PROPERTIES

Hardness: 75 (shore D)

APPLICATION

460B coating is available in liter or gallon containers, or dispensing cartridges. Pressure pots and pumps should be pre-specified for use with UV curable materials. Surfaces should be clean of oily residues and dust for maximum adhesion. Application thickness is recommended at 1 to 30 mils as required for the end use.

For thicker applications (greater than 10 mils), UVEXS recommends the chemistry be preheated to 100°F - 140°F prior to UV exposure. Preheating will reduce shrinkage during the cure cycle, resulting in maximum adhesion to the substrate.

COLOR CONCENTRATES

Pigment concentrates are available for adding to the clear coating. Various tint densities may be achieved by altering the proportion of concentrate in the clear coating. Adding the concentrate does not require special mixing equipment, simply stir into the clear. However, care should be taken to insure a correct percentage is added and that thorough mixing is accomplished. Concentrates are a thick liquid and are packaged in 4 oz jars. They are available in the following colors:

Lt. red:	401-5-D	Blue:	401-5-E
Yellow:	401-5-F	Green:	401-5-G
Black:	401-5-H	White:	401-5-I
Dk. blue:	401-5-K	Dk. red:	401-5-L

STORAGE AND HANDLING

Shelf life is warranted for a minimum of 6 months from date of shipment when stored in darkness at 50-75°F, in its original container.

Use with adequate ventilation and avoid contact with skin and eyes as directed on the MSDS. Latex type gloves are recommended when handling, and application should only be performed where a ventilated hood or enclosure draws vapors away from the user. In case of skin contact wash thoroughly with soap and water. Clean up of uncured coating from work areas and application equipment can be accomplished with standard solvents (IPA, MEK or acetone).