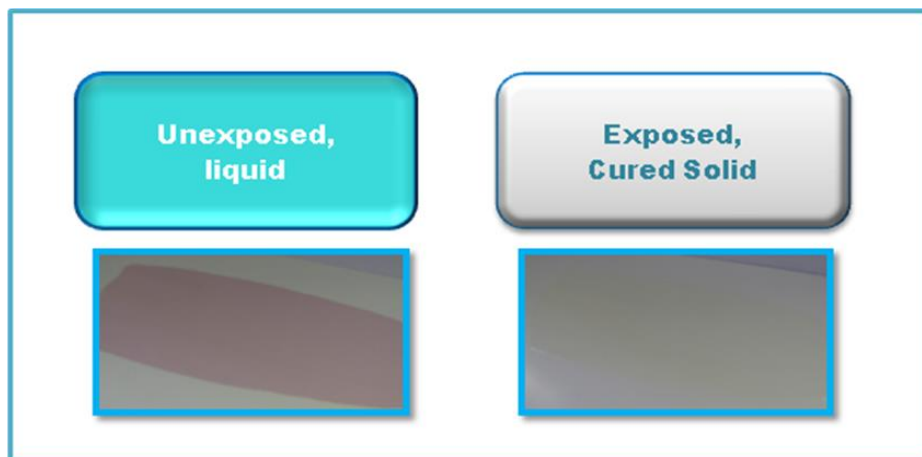


## COLOR CHANGE INDICATOR for UV CURABLE FLOORING.

### HOW NOT TO MISS A SPOT IN FIELD-APPLIED COATINGS

**The NEED:** A simple to use and definitive indicator to provide for certainty in floor surface exposure.  
**The SOLUTION:** UV induced irreversible color change additives.



### PERFORMANCE HIGHLIGHTS:

- Liquid color change concentrates - easy addition to floor coating formulas
- A low level of addition, 0.5 – 1 wt% (can be adjusted before coating depending on the floor roughness, coating thickness or flooring background color)
- Easy-to-see color in 2 – 7 mil thick coatings
- Long time color stability when the formula is stored in an unopened container
- Hours long color stability (no fading) after coating in indoor shop/warehouse lighting conditions, allowing an operator ample time to proceed with cure
- Areas “missed” by the curing apparatus will remain colored for easy inspection and selective areas additional passes
- Complete and irreversible bleaching under UV radiation (~150 mJ/cm<sup>2</sup> from a medium pressure mercury arc lamp)
- Several colors available with various color density and color disappearance rate and completeness

### PRODUCTS

#### 1. CR234/CR234B1/CR234BT1/CR234BT2B – BLUE to CLEAR

- For 100% solids UV curable field applied coatings
- Tested in various formulations, including Cytec Surface Specialties formulations based around modified polyester acrylate Ebecryl 891 (manufacturer recommended for concrete floor coatings)
- Color change properties are proven for a wide range of UV/EB cured products with the full range of reactive diluents, additives and photoinitiators

## 2. CR234-R33, CR236 (amine-free) – RED to CLEAR

- For 100% solids UV curable field applied coatings
- Tested in various formulations, including Cytec Surface Specialties formulations based around modified polyester acrylate Ebecryl 891 (manufacturer recommended for concrete floor coatings)
- Color change properties are proven for a wide range of UV/EB cured products with the full range of reactive diluents, additives and photoinitiators
- Fastest color disappearance

## 3. CR234-R33, CR236 (amine-free) – RED to CLEAR

- For waterbased UV curable field applied coatings
- Tested in Cytec Surface Specialties formulations based around acrylated polyurethane dispersion Ucecoat 7890 (manufacturer recommended for wood and vinyl composition tile, VCT, floor coatings) and a range of Bayhydrol waterbased UV PUDs from Bayer MaterialScience
- The nature of waterbased dispersion may influence the ease of incorporation

## 4. CR234-V4 (amine-free) – Violet to CLEAR

- For waterbased UV curable field applied coatings
- Tested in Cytec Surface Specialties formulations based around acrylated polyurethane dispersion Ucecoat 7890 (manufacturer recommended for wood and vinyl composition tile, VCT, floor coatings) and a range of Bayhydrol waterbased UV PUDs from Bayer MaterialScience
- The nature of waterbased dispersion may influence the ease of incorporation
- Fast color disappearance

**Samples are available for a nominal small fee. Commercial pricing in various size packages is available upon request.**

### **UV CURABLE COATINGS for FIELD-APPLIED FLOOR FINISHING**

Within recent years UV curable coatings for flooring finishing and repair have become popular. These coatings allow for a near instantaneous cure leading to much faster return to service as opposed to more traditional curing systems. In addition, being one-component systems UV curable coatings offer a benefit of low to zero VOC, indefinite pot life and easy cleanability. With careful formulation selection excellent abrasion resistance as well as exterior durability can also be realized.

For successful field-application of UV curable coatings some basic principles of UV curing equipment had to be rethought. Floors coated with liquid coating precursors became static substrates, while the UV light was delivered via mobile carts which housed both the power supply and the lamp. Such a configuration led to a number of challenges about the certainty of light delivery and degree of cure:

- The area to be cured is invariably much larger than the lamp aperture, so that it can only be accomplished by a number of subsequent parallel passes
- A human operator cannot always guarantee enough spatial precision that all passes will have a thin overlap and no flooring surface will be missed
- Even if equipped with the walking speed control option, some areas will see more light than others
- Industrial floors are generally not very smooth surfaces with roughness varying significantly from just a few to many tens of microns, leading to various coating thicknesses being deposited
- Process control is very difficult to exercise in a field environment as opposed to OEM

