

Photochromic slurries Technical Data Sheet

Storage and Handling

Photochromic slurries are more sensitive to the influences of solvents, UV light, pH, Shear and temperature than many other types of pigment. It should be noted that there are differences in performance of the various colors so that each should be thoroughly tested before commercial application.

Photochromic Slurry have excellent stability when stored away from heat and light. Store below 25°C. Do not allow it to freeze, as this will damage the photochromic capsules. Long-term exposure to UV light will degrade the photochromic capsules ability to change color. A shelf life of 12 months is guaranteed provided that the material is stored in a cool and dark environment. Storage

longer than 12 months is not recommended. Consult product MSDS prior to use.

Sensitivity

Photochromic microcapsules are sensitive to adverse environmental conditions. These are listed below, along with a description of the nature of the sensitivity, and recommendations with regards to them.

Mixing

Photochromic slurries can withstand most standard mixing procedures. Some shear is necessary as the microcapsules agglomerate slightly when in powder form. To disperse the powder

we recommend the use of a three-roll mill. If too much shear energy is used (e.g. bead mills) then the microcapsules can be crushed and the photochromic function destroyed.

Light

Photochromic slurries will degrade from UV exposure over Time. Exact life expectancies depend on the intensity and duration of the UV exposure. Some colors will degrade faster than others.

Do not use UV inhibitors over the photochromic powders as it will interfere with the color change properties.

Heat

Some colors may degrade quicker over time when held at elevated temperatures.

Chemicals

Photochromic slurries can be incorporated into many types of aqueous inks. However, photochromic materials are sensitive to chemical exposure. Care must be taken to avoid the use of polar solvents such as alcohols, acetates, etc. as these can damage the microcapsule walls.

All Applications using any SMAROL products should be thoroughly tested prior to approval for production.