

# Pigment Dispersions for Polysiloxane Coatings

Color Solutions

## Chroma-Chem® UCD® PS

### General Information

The UCD® PS Line colorants have been designed for use in polysiloxane-modified coatings. These products use a highly durable polysiloxane intermediate with closely controlled color strength and viscosity to permit reproducible color matches by volumetric machine dispensers or weight measurement in the plant.

### Key Benefits

The UCD® PS colorants are a series of 100%-solids colorants for high-performance coatings. Each product in the line consists of a dry pigment milled in a low-molecular-weight methoxy-functional polysiloxane intermediate. These colorants are designed to be reacted with other silicone, alkyd, epoxy, polyester, and hydroxyl-functional resins to produce coatings with outstanding properties.

The use of the UCD® PS colorants in silicone containing coatings will reduce the amount of color float compared to universal solvent-based coatings. The resin in the UCD® PS colorants is similar to the resins used in the coatings and will provide improved color incorporation.



## Properties

Silicone compounds typically provide excellent weatherability, chalk resistance, and heat resistance. Consequently, coatings containing a silicone intermediate that are colored by the UCD® PS colorants will tend to produce highly durable coatings. However, the coating system must be designed to cross-link the silicone intermediate in these colorants within the coatings film. Typical silicone curing mechanisms will be suitable.

The UCD® PS colorants are compatible with all baking and ambient temperature cured coatings. Due to the use of organic pigments, many colorants in this line are not suitable for high temperature coatings.

The tint strength of these colorants is controlled by volume to  $\pm 2\%$  to ensure optimal tinting performance in volumetric dispensing equipment. The viscosity and density of these products are tightly controlled to provide consistent volumetric dispensing and in-plant tinting capabilities.

## Applications

The UCD® PS line is formulated for use in high-end industrial coatings including, but not limited to, industrial maintenance, marine, and protective coatings.

## Compatibility

The UCD® PS colorants are to be used in reactive formulations based on alkyds, epoxies, polyesters, and hydroxyl-functional acrylics.

They have broad compatibility with most aromatic solvents, ketones, esters, chlorinated solvents, and glycol ethers.

## Shelf Life

Proper handling is essential to maintain good quality. It is recommended that the colorants be mixed prior to use. Containers should be tightly sealed when not in use.

Shelf life on the UCD® PS line colorants is 3 years from the date of manufacture in unopened containers.

Product Code	Description	CI Name	% Pigment		% Resin		% Other Non-Volatiles		Specific Gravity	VOC <sup>a</sup> g/L	Pigment Lightfastness		Pigment Resistance	
			X Wt.	X Vol.	X Wt.	X Vol.	X Wt.	X Vol.			Mass	Tint	Acid	Alkali
UCD-1060PS	Titanium Dioxide	PW 6	50.0	22.8	50.0	77.2	0.0	0.0	1.78	<10	N	N	N	N
UCD-1625PS	Lampblack	PBk 7	10.3	6.9	89.7	93.1	0.0	0.0	1.20	<10	N	N	N	N
UCD-4820PS	Phthalo Blue (GS)	PB 15:4	12.4	10.3	87.1	89.4	0.5	0.3	1.18	<10	N	N	N	N
UCD-4830PS	Phthalo Blue (RS)	PB 15:2	14.9	10.6	83.6	87.7	1.5	1.7	1.21	<10	N	N	N	N
UCD-5150PS	Phthalo Green (BS)	PG 7	15.0	8.7	85.0	91.3	0.0	0.0	1.24	<10	N	N	N	N
UCD-5643PS	Bismuth Vanadate	PY 184	60.0	20.8	39.2	77.6	0.8	1.6	2.28	<10	N	N	N	N
UCD-5750PS	Yellow Oxide	PY 42	33.0	12.6	67.0	87.4	0.0	0.0	1.51	<10	N*	N*	N	A
UCD-5762PS	Organic Yellow (RS)	PY 83	22.5	19.2	73.6	76.3	3.9	4.5	1.20	<10	N	N	N	N
UCD-6004PS	Fast Orange	PO 36	22.9	17.4	77.1	82.6	0.0	0.0	1.23	<10	N	N	N	N
UCD-6080PS	Red Oxide	PR 101	37.0	12.2	62.7	87.6	0.3	0.2	1.61	<10	N	N	N	N
UCD-6580PS	DPP Red	PR 254	21.0	18.5	77.5	79.8	1.5	1.7	1.19	<10	N*	S*	N	N
UCD-8030PS	Quinacridone Red	PV 19	10.5	7.1	89.5	92.9	0.0	0.0	1.20	<10	S	S	N	N
UCD-8443PS	Quinacridone Violet	PV 19	11.8	9.3	88.2	90.7	0.0	0.0	1.19	<10	S	S	N	N

<sup>a</sup>Expected values based on formulation

#### Lightfastness and Resistance Key

N	no bleed/discoloration	*	no Florida data, only Fadeometer
S	slight	**	no data
A	appreciable		

Lightfastness and Resistance information is provide for guidance purposes only.  
 Source: NPIRI Raw Materials Data Handbook Volume 4 (© 2000)

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