



UCD™ COLORANTS SF LINE

INTRODUCTION

UCD™ SF (solvent-free) colorants provide a broad color spectrum in a colorless unsaturated low-molecular-weight polyester resin containing no solvents or reactive monomers. These products are formulated at maximum pigment loading to minimize the effects of the polyester vehicle on the coating film.

Although the SF colorants are primarily used in curing formulations, the vehicle is also compatible with a variety of noncrosslinking resins, including vinyls, alkyds, nitrocellulose, acetates, and acrylic lacquers. The plasticizing effect of the SF resin occurs at levels above 15% of total vehicle solids. Therefore, when considering total pigmentation with SF colorants, the formulator should evaluate the potential impact of SF resin properties on film integrity very carefully. When crosslinked or covalently reacted, as in gel coatings, the SF vehicle is fully converted to a portion of the vehicle solids.

COMPATIBILITY

RESINS

Air-drying

Nitrocellulose
Acrylics
VT alkyds
Medium and short-oil alkyds
Polyesters
Functional vinyls
Carboxylated vinyls
Oil-modified urethanes
Unmodified urethanes

Thermosetting

Alkyd ureas
Alkyd melamines
Polyester melamines
Polyester isocyanates
Acrylic isocyanates
Epoxy polyamides

Note: The SF dispersing resin is insoluble in water and glycol.

SOLVENT

Alcohols

Methanol
Isopropanol
Butanol

Hydrocarbons

toluene
xylene
VM&P naphtha

Esters

isobutyl acetate
PM acetate
n-butyl acetate

mineral spirits
SC-100
ethyl benzene

Ketones

Ethers

butyl Cellosolve®
methyl ethyl ketone

methyl isobutyl ketone

cyclohexanone

CHEMISTRY

Unsaturation in the linear backbone of the SF vehicle allows monomeric crosslinking with styrene, methyl methacrylate, and other unsaturated vinyl monomers. The polyester resin also has secondary hydroxyl groups. The equivalent weight is 319 (solids).

The ultraviolet stability of the SF resin is excellent; extended QUV exposure (1,000 hours) has no effect on its appearance

PROPERTIES

The tinting strength of the colorants is controlled to $\pm 2\%$ of the standard. The color difference is controlled to less than 0.8 CIELAB units with the individual color components (DA, DB, and DL) controlled to ± 0.80 CIELAB units.

Shelf life on the SF line colorants is 5 years from the date of manufacture.



Plasticolors, Inc.

			COMPOSITION				PIGMENT PERFORMANCE								
		Index	% Pigment		% Resin		Theo. Density	Lightfastness		Bleeding				Resistance	
Code	Color	Name	Wt	Vol	Wt	Vol	Lb/Gal	Mass	Tint	Oil	Spirits	Toluene	Lacquer	Acid	Alkali
1106	Titanium Dioxide	Wh 6	60.0	28.1	40.0	71.9	15.60	E	E	N	N	N	N	E	E
1507	Carbon Black	Bk 7	12.0	7.2	88.0	92.8	9.01	E	E	N	N	N	N	E	E
1625	Lampblack	Bk 7	11.5	6.9	88.5	93.1	8.99	E	E	N	N	N	N	E	E
4820	Phthalo Blue G	Bl 15:3	14.0	10.1	86.0	89.9	8.94	E	E	N	N	N	N	E	E
4830	Phthalo Blue R	Bl 15:2	12.0	8.4	88.0	91.6	8.89	E	E	N	N	N	N	E	E
5138	Phthalo Green B	G 7	17.0	9.3	83.0	90.7	9.33	E	E	N	N	N	N	E	E
5639	Diarylide Yellow	Y 14	15.0	11.0	85.0	89.0	8.94	G	F	N	N	N	N	E	E
5696	Organic Yellow	Y 151	20.0	14.8	80.0	85.2	9.10	E	E	N	N	N	N	E	G
5752	Yellow Oxide	Y 42	47.0	18.2	53.0	81.8	13.18	E	E	N	N	N	N	E	E
5767	Paliotol Yellow	Y 153	25.0	17.4	75.0	82.6	9.40	E	E	N	S	C	N	F	F-P
5832	Raw Umber	Br 7	38.0	14.4	62.0	85.6	11.78	E	E	N	N	N	N	E	E
5861	Burnt Umber	Br 7	35.0	13.3	65.0	86.7	11.41	E	E	N	N	N	N	E	E
6012	Organic Orange	Or 34	23.5	18.4	76.5	81.6	9.11	G	F	N	N	S	N	E	E
6080	Red Oxide	R 101	45.0	14.4	55.0	85.6	13.30	E	E	N	N	N	N	E	E
7945	Arylide Red	R 170	15.0	11.4	85.0	88.6	8.90	G	F	N	N	N	S	E	E
7959	Quinacridone Red	V 19	15.0	11.0	85.0	89.0	8.94	E	E	N	N	N	N	E	E
8087	Quinacridone Violet	V 19	11.0	7.8	89.0	92.2	8.85	E	E	N	N	N	N	E	E

The performance data shown in this table are taken from the pigment suppliers' literature: E=Excellent, G=Good, F=Fair, S=Slight, C=Considerable, P=Poor, N=None

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.

