

Machine Dispensable Pigment Dispersions for Reactive Coatings

Color Solutions

Chroma-Chem® FLV

General Information

The FLV Series colorants are specifically designed for use in epoxy, polyurethane and polyaspartic coatings across various substrates. Their optimized rheological profile provides exceptional handling properties offering superior performance compared to many colorants formulated with 100% solids epoxy / polyol resins or plasticizers.

Key Benefits

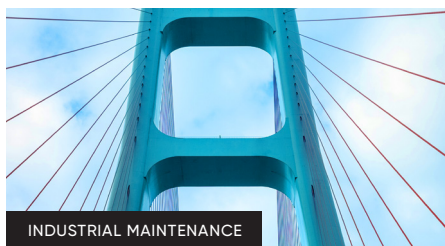
The FLV Series pigment dispersions feature a blend of organic and inorganic pigments milled in a proprietary system designed to ensure broad compatibility with various resin chemistries. This formulation method also enhances long-term viscosity and colorant stability. With a high level of bio-based components in 100% solids liquid vehicle, the FLV Series provides a more sustainable option compared to other colorant lines.

Unlike colorants based on epoxy resins, which increase in viscosity over time, the FLV Series maintains viscosity stability for up to two years. These dispersions exhibit no solidification, gelling or crystallization under proper storage conditions. They remain usable at temperatures above 30°F (-1°C); below this threshold, freezing may occur. Tested across four freeze/thaw cycles, the colorants demonstrated no adverse effects on performance.

Formulated at maximum pigment loading, the FLV Series minimizes impact on the final coating's properties. In addition to preserving coating performance, in some instances these colorants have been shown to slightly enhance adhesion and chemical resistance in certain systems.



CONCRETE PROTECTION



INDUSTRIAL MAINTENANCE



PROTECTIVE

Properties

The FLV Series colorants offer the coatings formulator a product line with low VOC levels, excellent pigment development and good performance characteristics. The tint strength of these colorants is controlled to the tightest capable specification of $\pm 2\%$. Color difference is also tightly controlled to ensure lot-to-lot consistency.

The viscosity range of these colorants is 60 – 80 KU (70 – 120 KU for the white colorant). This range makes these colorants suitable for machine dispensing or in-plant use.

The colorants are formulated to have a thixotropic characteristic. The thixotropy of each colorant aid in pigment suspension where there is very little to no settling of the pigment even at higher storage temperatures which leads to excellent shelf stability and machine dispenser performance.

The proprietary liquid vehicle in the FLV Series has an epoxy equivalent weight of approximately 213. This value is in the range of systems containing epoxy resin and glycidyl esters.

Applications

The FLV Series is formulated for use in protective floor coatings, and other high-solids reactive coatings based on epoxy, polyurethane, and polyaspartic resins. It can be used in similar systems for other applications including, but not limited to, automotive, coil, industrial maintenance, marine, metal containers, pipe and other protective coatings.

Compatibility

The FLV Series colorants are compatible with most epoxy, polyurethane, and polyaspartic coating systems. They are also compatible with epoxy coatings formulated with diluent. However, increasing levels of diluent in the coating may lead to color control issues (flocculation, color float).

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 and stored in dry, room-temperature conditions.

The shelf life on the FLV Series colorants in unopened containers is two years from the date of manufacture.

Product Code	Description	CI Name	% Pigment		% Resin		% Other Non-Volatiles		Specific Gravity	VOC ^a g/L	Pigment Lightfastness		Pigment Resistance	
			X Wt.	X Vol.	X Wt.	X Vol.	X Wt.	X Vol.			Mass	Tint	Acid	Alkali
FLV-020027	Carbon Black	Black 7	20.7	12.3	74.9	83.4	4.4	4.3	1.06	<10	N	N	N	N
FLV-020028	Black Oxide	Black 11	53.0	18.2	43.0	75.6	4.0	6.2	1.68	<10	N	N	N	N
FLV-070089	Red Oxide	Red 101	72.0	33.6	26.6	63.5	1.4	2.9	2.28	<10	N	N	N	N
FLV-070091	Organic Red	Red 170	18.5	14.0	75.0	79.9	6.5	6.1	1.02	<10	N*	S*	N	N
FLV-10886	White	White 6	72.9	39.8	19.8	45.5	7.3	14.7	2.18	<10	N	N	N	N
FLV-30748	Blue	Blue 15:2	21.2	14.0	71.7	79.1	7.1	6.9	1.05	<10	N	N	N	N
FLV-50339	Green	Green 7	18.2	9.3	74.7	83.7	7.1	7.0	1.07	<10	N	N	N	N
FLV-80944	Yellow Oxide	Yellow 42	63.5	29.0	34.8	68.0	1.7	3.0	1.87	<10	N	N	N	N
FLV-80946	Organic Yellow	Yellow 151	13.6	9.8	80.0	84.2	6.4	6.0	1.01	<10	N*	N*	N	A
FLV-80948	Bismuth Vanadate Yellow	Yellow 184	67.5	24.4	30.1	70.5	2.4	5.1	2.24	<10	N	N	N	N
FLV-070105	Quinacridone Red	Violet 19	24.9	17.5	69.7	77.2	5.4	5.3	1.04	<10	S	S	N	N
FLV-30758	Quinacridone Violet	Violet 19	25.8	17.9	69.8	77.7	4.4	4.4	1.03	<10	S	S	N	N
FLV-30786	Blue G/S	Blue 15:4	27.0	18.9	67.5	75.7	5.5	5.4	1.06	<10	N	N	N	N
FLV-80981	Red-shade Yellow	Yellow 83/151	17.4	11.9	76.4	82.2	6.2	5.9	1.03	<10	S	S	N	N
FLV-60313	Orange	Orange 34/36	23.7	16.5	70.8	78.1	5.5	5.4	1.05	<10	S	S	N	N

^aExpected 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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