Pigment Dispersions for Epoxy Coatings

Color Solutions

Chroma-Chem® ED

General Information

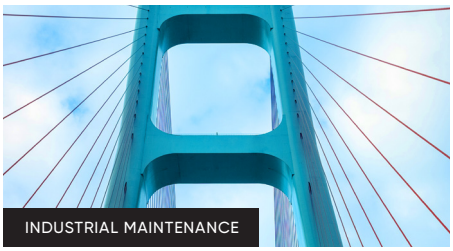
The ED Series colorants have been formulated for use in epoxy coatings. These colorants are formulated to limit the negative impact on the final epoxy coating. Therefore, the rheology of these colorants tends to be more viscous and is suitable for in-plant tinting.

Key Benefits

The ED Series pigment dispersions for epoxy applications consist of organic and inorganic pigments milled in a bisphenol A epoxy resin. The dispersing resin used in each colorant formulation was chosen to ensure broad compatibility in most epoxy coatings. In only a couple of cases, additives were needed to stabilize these colorants. Therefore, the coatings formulator can develop a coatings system that will not be negatively impacted when tinted with the ED Series colorants.

These colorants are also formulated at maximum pigment loading to limit most effects on the final coating's properties. The formulation of each colorant within the series was developed to ensure the stability and handling properties were maintained. As with most epoxies, some thickening of the colorants can be expected over time.


CONCRETE PROTECTION


INDUSTRIAL MAINTENANCE


PROTECTIVE

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Properties

The ED 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 by weight to +/- 10%. Color difference is also controlled to ensure lot-to-lot consistency.

The epoxide equivalent weight is approximately 189. Typical curing agents are aliphatic amines, cycloaliphatic amines, polyamides, amindoamines, aromatic amines, and anhydrides.

Applications

The ED Series is formulated for use in epoxy industrial coatings including, but not limited to, automotive, coil, concrete protective, industrial maintenance, marine, metal containers, pipe, and other high performance protective coatings.

Compatibility

The ED Series colorants are compatible with most epoxy 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.

The shelf life on the ED 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]	Pigment Lightfastness		Pigment Resistance	
			X Wt.	X Vol.	X Wt.	X Vol.	X Wt.	X Vol.		g/L	Mass	Tint	Acid	Alkali
ED-02235	Black LV	Black 7	21.3	14.8	78.7	85.2	0	0	1.25	<10	N	N	N	N
ED-02831	Black	Black 7	28	20.1	72	79.9	0	0	1.29	<10	N	N	N	N
ED-03045	Blue	Blue 15:2	15	11.2	85	88.8	0	0	1.21	<10	N	N	N	N
ED-03078	Blue	Blue 15:2	10.3	7.7	89.7	92.3	0	0	1.19	<10	N	N	N	N
ED-07167	Red	Red 144	18	14.3	82	85.7	0	0	1.21	<10	A	N*	N	N
ED-08105	Organic Yellow	Yellow 151	20	15.8	80	84.2	0	0	1.22	<10	N*	N*	N	A
ED-10130	Epoxy White	White 6	43.3	18.1	56.7	81.9	0	0	1.67	<10	N	N	N	N
ED-1018	Epoxy White	White 6	47.9	21	52.1	79	0	0	1.75	<10	N	N	N	N
ED-20892	Black	Black 7	14	9.5	81.6	85.4	4.4	5.1	1.21	<10	N	N	N	N
ED-2090	Black Epoxy	Black 7	9.7	6.5	90.3	93.5	0	0	1.2	<10	N	N	N	N
ED-30087	Blue	Blue 15:4	21.1	15.7	78.9	84.3	0	0	1.24	<10	N	N	N	N
ED-30111	Violet	Violet 19	21.6	15.8	76.5	81.9	1.9	2.3	1.24	<10	S	S	N	N
ED-30157	Blue	Blue 15:2	10.3	7.7	89.7	92.3	0	0	1.19	<10	N	N	N	N
ED-3039	Blue	Blue 29	45	28.8	55	71.2	0	0	1.5	<10	N	N	A	N
ED-5013	Green	Green 7	23.5	14.5	76.5	85.5	0	0	1.29	<10	N	N	N	N
ED-70187	Red	Red 170	18	15.9	82	84.1	0	0	1.19	<10	N*	S*	N	N
ED-70216	Red	Violet 19	16.5	12.7	83.5	87.3	0	0	1.21	<10	S	S	N	N
ED-7027	Red Epoxy	Red 101	53.8	21.6	46.2	78.4	0	0	1.96	<10	N	N	N	N
ED-70572	Violet	Violet 23	20	16.2	80	83.8	0	0	1.21	<10	N	S	N	N
ED-80187	Yellow LV	Yellow 14	22.7	19.6	77.3	80.4	0	0	1.2	<10	S	A	N	N
ED-80311	Yellow ECG	Yellow 184	35	8.7	65	91.3	0	0	1.63	<10	N	N	N	N
ED-8033	Yellow	Yellow 42	37.7	14.6	62.3	85.4	0	0	1.59	<10	N	N	N	N

[a] 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)