

# Pigment Dispersions for Epoxy Coatings

Color Solutions

## Chroma-Chem® EDC

### General Information

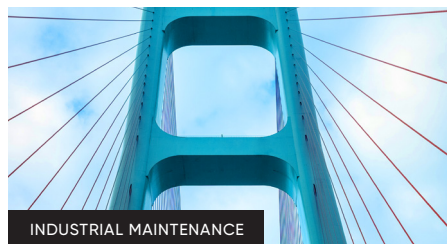
The EDC Series colorants have been formulated for use in epoxy coatings. These colorants are formulated with epoxy resin and diluent to have improved handling properties. The rheology of these colorants tends to be somewhat viscous, but lower than straight epoxy systems.

#### Key Benefits

The EDC Series pigment dispersions for epoxy applications consist of organic and inorganic pigments milled in a bisphenol A epoxy resin with a diluent commonly used in epoxy systems. The dispersing resin and diluent used in each colorant formulation was chosen to ensure broad compatibility in most epoxy coatings.

Straight epoxy system tend to be viscous. The incorporation of a glycidyl ether to the color formulations allow for lower viscosity products. The level of the diluent is kept below a level where excessive diluent can cause color control issues. A balance between lower viscosity and colorant performance has been achieve with the EDC Series colorants.

These colorants are also formulated at maximum pigment loading to limit the colorant's effects on 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.



## Properties

The EDC 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 will be approximately 220. Typical curing agents are aliphatic amines, cycloaliphatic amines, polyamides, amindoamines, aromatic amines, and anhydrides.

## Applications

The EDC 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 EDC 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 EDC 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 <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
EDC-02291	Super Black	Black 7	33.3	23	60	699	6.7	7.1	1.24	<10	N	N	N	N
EDC-10198	Epoxy White	White 6	69.1	37.2	29.8	60.7	1.1	2.1	2.15	<10	N	N	N	N
EDC-20681	Super Black	Black 7	25	16.5	70.4	78.3	4.6	5.2	1.19	<10	N	N	N	N
EDC-20682	Black	Black 7	25	16.5	70	77.9	5	5.6	1.18	<10	N	N	N	N
EDC-30266	Blue	Blue 15:2	25	18.2	72.5	79	2.5	2.8	1.16	<10	A	N*	N	N
EDC-30267	Ultramarine Blue	Blue 29	58.2	39	40	58.4	1.8	2.6	1.57	<10	N*	N*	N	A
EDC-30268	Blue	Blue 15:2	25	17.6	70	76.8	5	5.6	1.17	<10	N	N	N	N
EDC-50100	Green	Green 7	25	14.4	75	85.6	0	0	1.31	<10	N	N	N	N
EDC-50119	Green	Green 7	25	14.8	71.2	80.9	3.8	4.3	1.21	<10	N	N	N	N
EDC-60211	Orange	Orange 34	15	12.4	76	77.5	9	10.1	1.18	<10	N	N	N	N
EDC-60258	DPP Orange	Orange 73	20.5	18.7	78.1	79.7	1.4	1.6	1.18	<10	N	N	N	N
EDC-70411	Red	Red 101	68.6	32	30	65	1.4	3	2.28	<10	S	S	N	N
EDC-70428	Red	Violet 19	20	14.4	75	80.2	5	5.4	1.13	<10	N	N	N	N
EDC-80205	Yellow HS LV	Yellow 14	25.3	20.9	71.6	75.4	3.1	3.7	1.15	<10	N	N	A	N
EDC-80326	Yellow	Yellow 42	60	27.8	37.9	68.4	2.1	3.8	1.9	<10	N	N	N	N
EDC-80345	Yellow	Yellow 151	22.5	16.6	72.5	78	5	5.4	1.14	<10	N*	S*	N	N
EDC-80490	Yellow	Yellow 83	25	20.1	70	74.5	5	5.4	1.12	<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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