Product Datasheet

SP&S
Specialty Polymers and Services

Epoxicolor® Color Pastes

HIGH QUALITY EPOXY COLORANTS

The Epoxicolor® colorants are smooth pastes that are used to tint epoxy, polyurethane and many other types of polymers. These pastes are compatible with most epoxy and polyurethane systems and with some polyester and PVC formulations. The Epoxicolor pastes allow for the simple, inexpensive and uniform coloration of most systems with little or no effect on the cured properties of the resins to which they are added.

The Epoxicolor® Pastes contain no solvents or plasticizers that can contribute to outgasssing or reduce cured properties. High purity inorganic and/or organic pigments are used and a variety or resin bases are available including standard bisphenol A epoxy resin, cycloaliphatic resins, and distilled/low ionic content epoxy resins. The colors produced are resistant to changes in color due to heat, UV light, and most common chemicals but for added resistance, custom versions containing antioxidants, UV stabilizers, or thermal stabilizers can be provided on request. The current standardized colors are the following:

Color	Epoxicolor Number	Resin type	Pigment type	Comments
White	001	Bisphenol A epoxy resin	Titanium Dioxide	High hiding power, UV resistant
White	001-60	Bisphenol A epoxy resin	Titanium Dioxide	Extra high hiding power, UV resistant
White	001D	Bisphenol A epoxy resin, distilled for low ionic content	Titanium Dioxide	High hiding power, UV resistant
White	002	Bisphenol A epoxy resin	Lithopone	Low cost, doesn't cover other colors
White	101	Cycloaliphatic Epoxy resin	Titanium Dioxide	High hiding power, UV resistant
Red	011	Bisphenol A epoxy resin	Organic Pigments	Similar to red bell pepper or paprika
Dark Red	012	Bisphenol A epoxy resin	Organic Pigments	"Blood red"
Medium Orange	021	Bisphenol A epoxy resin	Organic Pigments	Bright medium orange
Medium Yellow	031	Bisphenol A epoxy resin	Organic Pigments	Similar to "yellow mustard"
Bright "Safety" Yellow	032	Bisphenol A epoxy resin	Organic Pigments	
Green	041	Bisphenol A epoxy resin	Organic Pigments	Light green
Medium Green	042	Bisphenol A epoxy resin	Organic Pigments	Medium green
"John Deere"	043	Bisphenol A epoxy resin	Organic Pigments	Bright yellow-green
Dark Green	044	Bisphenol A epoxy resin	Organic Pigments	Deep dark green
"Olive Drab"	045	Bisphenol A epoxy resin	Organic Pigments	US Army style gray-brown-green
Dark Blue	051	Bisphenol A epoxy resin	Organic Pigments	Strong dark blue
Blue-Black	052	Bisphenol A epoxy resin	Pigment blend	Similar to "Midnight Blue"
Purple	061	Bisphenol A epoxy resin	Organic Pigments	Similar to "Grape Jelly"
Deep Lavender	061	Bisphenol A epoxy resin	Organic Pigments	Deep lavender tone
Dark Brown	071	Bisphenol A epoxy resin	Organic Pigments	
Chocolate Brown	072	Bisphenol A epoxy resin	Raw Umber	Warm brown, compliments wood
Gray	081	Bisphenol A epoxy resin	Carbon Black / Titanium Dioxide	Excellent hiding & UV resistance
"NEMA" Gray	181	Cycloaliphatic Epoxy resin	Carbon Black / Titanium Dioxide	Excellent hiding & UV resistance
Black	091	Bisphenol A epoxy resin	Carbon Black	Strong hiding & good UV resistance
Black	091-20	Bisphenol A epoxy resin	Carbon Black	Extra strong hiding & good UV resistance
Black	092	Bisphenol A epoxy resin	Black Iron Oxide	In some applications may give better dielectric properties than carbon black
Black	092D	Bisphenol A epoxy resin, distilled for low ionic content	Black Iron Oxide	Good dielectric properties
Black	191	Cycloaliphatic Epoxy resin	Carbon Black	Strong hiding & good UV resistance

Epoxicolor "0" series (ex. 001) – The "0" series of color pastes are our standard low cost colorants based on standard bisphenol A epoxy resins. They are general purpose and suitable for most applications.

Epoxicolor "D" series (ex. 001D) – The "D" series of colorants are based on the same pigments and pigment concentration as the standard series that they are part of, but are manufactured with distilled, low ionic concentration epoxy resins that are suitable for semi-conductor and other ionic sensitive applications. These color pastes are generally slightly low in viscosity than their numeric equivalent color paste. If you are interested in other colors in this series please contact us.

Epoxicolor "100" series (Ex 101) - The "100" series of colorants are based on the same pigments and pigment concentration as the standard 0## series but are manufactured with a cycloaliphatic epoxy resin. This gives these color pastes added UV resistance and a lower viscosity. The ionic purity is also generally good. The "100" series colorants are most typically used with specialty epoxy resin formulation based on hydrogenated or cycloaliphatic resins such as Araldite® CY 184, Araldite® CY 179, ERL 4221, etc. which intended for outdoor or other UV resistant applications. They also have been used with some aliphatic polyurethane systems and again contribution to the overall UV resistance of the cured polymer.

Epoxicolor DE- 11 Series : originally introduce in the 1960's by Delta Plastics Company* these bisphenol A epoxy resin based colorants are made-to-order in dozens of specialty colors.

Color Number	Color list	Color Number	Color list
DE 11-10	Black	DE 11-533	Baby Pink
DE 11-21	Lawn Green	DE 11-54	Tile Red
DE 11-23	Hunter Green	DE 11-59	Floor Red
DE 11-31	Dark Blue	DE 11-591	Plum
DE 11-32	Powder Blue	DE 11-60	Aqua
DE 11-33	Morning Blue	DE 11-603	Ocean Green
DE 11-311	Boy Blue	DE 11-604	Turquoise Green
DE 11-37	Phthalo Blue	DE 11-61	Pink
DE 11-40	Yellow	DE 11-613	Salmon
DE 11-401	Golden Yellow	DE 11-62	Mist Green
DE 11-446	Buff	DE 11-63	Violet
DE 11-45	Tangerine	DE 11-64	Purple
DE 11-46	Light Yellow	DE 11-65	Maroon
DE 11-47	Pale Yellow	DE 11-66	Flesh Tone
DE 11-48	Light Orange	DE 11-70	White
DE 11-49	Goldenwheat	DE11-71	Colonial White
DE 11-491	Spectral Gold	DE 11-711	Navajo White
DE 11-50	Bright Red	DE 11-72	Chestnut
DE 11-51	Dark Red	DE 11-722	Autumn Brown
DE 11-52	Living Red	DE 11-724	Raw Umber
DE 11-53	Rose Red	DE 11-725	Weathered Tan
DE 11-531	Pimento Red	DE 11-733	Beige
DE 11-532	Sunset Pink	DE 11-733	Palomino

SUGGESTED PROCESSING GUIDELINES:

To use, mix the required quantity of Epoxicolor into the resin until the mixture is uniform. A maximum of 3% by weight of the resin is generally recommended. In most applications, a level less than 3% by weight of the resin will not require an adjustment to the ratio between the resin and hardener.

Mixtures of the various Epoxicolors can be used to make a custom blend for color matching, aesthetic or other purposes. For example, adding a small amount of the Epoxicolor 001 will increase the opacity or hiding power of the other colorants and varying the amount of white colorant added allows control of the final color tone – smaller amounts of white general producing darker tones and larger amounts producing progressively paler tones. Blends of the Epoxicolors with each other are generally stable indefinitely. Blends of the Epoxicolors into most epoxy resins are stable for extended periods, but blends of the Epoxicolors into amine, anhydride or similar hardeners or curatives may cause a gelation of the mixture.

Processing of the colored resins at high temperatures such as 160ºC (160ºC) or higher with air exposure can result in darkening of the color and possibly to changes in the surface shading of the cured polymers. Curing in nitrogen or under vacuum will reduce or eliminate this effect as can the addition of certain antioxidants. Please contact us for a custom blended colorant if this might be a concern in your application.

Available Packaging:

Most of the Epoxicolor pastes can be supplied in pints, quarts, gallons, 2.5 gallon, 5-gallon, or 55-gallon containers – although some package sizes are not stocked and so may have lead-time up to 2-3 weeks. Most Epoxicolors are also available in 4 oz squeeze tubes.

STORAGE GUIDELINES:

Store these materials in a clean, cool and dry environment in their tightly closed original containers. Protect from extended exposure to temperatures below 15ºC (59ºF). Crystallization may occur if the material is exposed to cold for extend periods. “D” series products are especially prone to crystallization. If crystallization occurs, heat the entire container for 4 hours at 50ºC to re-liquefy the material. Allow to cool to ambient temperature and re-mix prior to using. If the recommended storage conditions are observed the products will have a minimum shelf-life of 12 months from the date of shipment.

HANDLING PRECAUTIONS:

Mandatory and recommended industrial hygiene procedures should be followed whenever these products are being handled and processed. For additional information please consult the corresponding material safety data sheets.

PERSONAL HYGIENE:

Warning! May cause eye & skin irritation. Prolonged or repeated skin contact may cause allergic skin reactions. Harmful if inhaled or swallowed. Avoid contact with eyes, skin, or clothing. Wear eye protection and impervious gloves when handling. Wash thoroughly after handling. Avoid breathing vapor or mist. Keep containers closed when not in use. Use only with adequate ventilation. Do not take internally.

FIRST AID

In case of contact: **Skin** – Immediately wash skin thoroughly with mild soap and water. Remove contaminated clothing and wash before reuse. Destroy contaminated shoes and other articles made of leather. **Eyes** – Immediately

flush eyes with plenty of water for 15 minutes and get prompt medical attention. **Inhalation** - Remove person to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician. **Ingestion** - Do not induce vomiting. Dilute with plenty of water and contact physician immediately. Never give anything by mouth to an unconscious person.

DISCLAIMER:

IMPORTANT: The following supercedes Buyer's documents. **SELLER / MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE**. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller / Manufacturer be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict liability, tort or contract arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results presented are based on controlled or laboratory work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended

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*Please note that the DE-11 series of colorants was original developed by Delta Plastic Company (also known as Epoxy Resin Innovators, Inc.) and that product line was acquired by SP&S in December 2019. The color name or descriptions are based on historical information provided by Delta Plastics Company and may not have been review or re-verified by SP&S. As with all color names they should be used as general guides only and samples should be evaluated for suitability for particularly applications and specification agreed with the supplier if specific color matches are required.