
## Look to Emerald, the Experts in Color. Now Bringing New Energy Curable products for Coatings...

Emerald Hilton Davis has been a leader in bringing color technology to food, cosmetics and industrial applications for nearly 100 years. Through our technical expertise, processing technology, Quality Control and color matching capabilities, we offer unparalleled consistency and quality for every printing need – UV, offset, waterbased inks, ink jet applications and everything in between.

We are proud to introduce you to Lucida Colors™ EC, a new line of advanced pigment technology from Emerald Hilton Davis. **Lucida Colors™ EC Dispersions** incorporate new and unique energy curable pigment dispersion technology and combines this with years of color development experience to produce our newest offerings to ink and coatings markets. We have created highly functional energy curable dispersions with high pigment solids and color strength making an extremely versatile and unique group of products. Lucida Colors™ EC Dispersions are easily incorporated into typical ink systems and coatings formulations and provides excellent printability. All Lucida Colors™ EC products are formulated with Low Odor considerations.

## Lucida Colors™ Energy Curable Products for Coatings Applications

**Lucida Colors™ ECF – Energy Curable Formulations for the Coatings Industry**

| Description | Emerald Code | CI Number | Strength% |
|---|---|---|---|
| Lucida Colors™ ECF Black | 5C90A727 | Black 7 | 42% |
| Lucida Colors™ ECF Lithol Rubine | 5C90A157 | Red 57:1 | 40% |
| Lucida Colors™ ECF Napthol Red | 5C90A112 | Red 22 | 35% |
| Lucida Colors™ ECF Quniacridone Red | 5C90A133 | Red 122 | 35% |
| Lucida Colors™ ECF Yellow 74 | 5C90A220 | Yellow 74 | 40% |
| Lucida Colors™ ECF HR Yellow | 5C90A218 | Yellow 83 | 30% |
| Lucida Colors™ ECF Phthalo Blue | 5C90A315 | Blue 15:4 | 40% |
| Lucida Colors™ ECF Alkali Blue | 5C90A324 | Alkali Blue 61 | 30% |
| Lucida Colors™ ECF Orange 5 | 5C90A610 | Orange 5 | 40% |
| Lucida Colors™ ECF Orange 34 | 5C90A604 | Orange 34 | 40% |
| Lucida Colors™ ECF White | 5C90A008 | White | 70% |
| Lucida Colors™ ECF Extra Strength White | 5C90A006 | XST White | 75% |

**Lucida Colors™ ECT – Energy Curable TransOxide Formulations for the Coatings Industry.**

| Description | Emerald Code | | Strength% |
|---|---|---|---|
| Lucida Colors™ ECT Yellow Transoxide | 5C90A225 | Yellow 42 | 40% |
| Lucida Colors™ ECT YS Red Transoxide | 5C90A120 | YS Red 101 | 40% |
| Lucida Colors™ ECT BS Red Transoxide | 5C90A126 | BS Red 101 | 40% |
| Lucida Colors™ ECT Black Transoxide | 5C90A720 | Black 11 | 40% |

**STORAGE AND HANDLING:** **Always refer to our Material Safety Data Sheets for important information about our products. Our engineers are always ready to discuss the storage and handling of any of our products.**

Emerald Performance Materials
Hilton Davis

# Lucida Colors™ Energy Curable Products for Coatings Applications

## Hilton Davis®

## Dyes, Lakes and Dispersions

**A Rainbow of Color- Bright Stable Consistent**

Emerald Performance Materials
Hilton Davis

**Emerald Performance Materials™ is a manufacturer of additives and polymers which make your products last longer, look, taste, smell, or perform better. Emerald Specialties Group focuses on providing customers with additives, colors and process aids for food and industrial applications such as coatings, adhesives, ink, graphic arts, paper, textiles, metal working and others. The company has 4 business groups, 8 locations and 700 employees to serve customer needs globally. For information on these and other Emerald™ products visit** www.emeraldmaterials.com.

**OTHER PRODUCT LINES FOR COATINGS APPLICATIONS: Black Shield™ dispersions, TRANS OXIDE® dispersions, FOAM BLAST® defoamers, MASIL® specialty silicones. Other Emerald divisions offer EPALLOY™ specialty epoxies, and K-FLEX® coalescents and plasticizers.**

## Contact Information:


### Emerald Specialties

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**www.emeraldmaterials.com**




January 2012


Emerald Performance Materials
Hilton Davis


## Now Bringing 0-VOC, Formaldehyde-Free, APE-free VERDIS™ Dispersions for In-Plant Tinting of Aqueous Systems.

**Emerald Hilton Davis** has been a leader in bringing color technology to food, cosmetics and industrial applications for nearly 100 years. Through our process know-how, Quality Control and color matching capabilities, we offer unparalleled consistency and quality for coatings and stains – 0-VOC, aqueous, solvent, alkyd and everything in between.

### VERDIS™ Dispersions offer many advantages:

- 0-VOC, Formadehyde-free and APE-free dispersion for in-plant tinting
- Wide compatibility with many resin systems, vehicles and additives
- Batch to batch consistency – color, tinctoral strength, particle size distribution
- Maximum package stability, resistance to bacterial growth, and freeze-thaw stability
- Ease of use; free-flowing, viscosity stable

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| Product Code | VERDIS™ DISPERSION PRODUCTS | Color Index Name | % Pigment by Weight |
|---|---|---|---|
| 6C11G090 | Titanium Dioxide | W-6 | 67.00% |
| 6C11G190 | Trans-Oxide Red | R-101 | 40.00% |
| 6C11G192 | Magenta | R-122 | 34.50% |
| 6C11G194 | Red Iron Oxide | R-101 | 59.00% |
| 6C11G196 | Organic Red | Blend | 33.10% |
| 6C11G290 | Trans-Oxide Yellow | Y-42 | 44.00% |
| 6C11G292 | Yellow Iron Oxide | Y-42 | 58.00% |
| 6C11G294 | Yellow GS | Y-151 | 40.70% |
| 6C11G296 | Yellow RS | Blend | 41.70% |
| 6C11G390 | Phthalo Blue 15:2 | B-15:2 | 35.00% |
| 6C11G490 | Phthalo Green | G-7 | 40.00% |
| 6C11G590 | Quinacridone Violet | V-19 | 33.00% |
| 6C11G690 | Brown Oxide | Blend | 56.30% |
| 6C11G692 | Raw Umber | BR-7 | 44.00% |
| 6C11G790 | Tinting Black | BK-7 | 34.00% |

www.emeraldmaterials.com

Emerald Performance Materials
Hilton Davis

# Emerald Specialties: Products for Coatings

**FOAM BLAST® Defoamers** – Contact us for every type from A to Z!

**MASIL® Silicones –** Modified functional silicones

**Black Shield™** Dispersions – A complete product line of carbon black dispersions.

**Dry Pigments –** contain no solvents or vehicles, universally compatible in coatings, inks, plastics.

**Color Dispersions**:

- **Super Seatone® & Sup-R-Conc®** - for Aqueous Latex & Water-reducible systems
- **VERDIS™ Dispersions -0-VOC/Formaldehyde-free/APE-free -** for In-plant tinting of Aqueous Systems
- **Formulator & Industrial** – Long-Oil and Short-Oil Alkyd vehicles for solvent-based systems – alkyds, epoxies, urethanes, polyesters and more.
- **Sup-R-Cryl II ®** Thermoplastic Acrylic Dispersions – Utilizes PM Acetate Aromatic100 for high performance and solvent solution coatings.
- **Auracote®** Plasticizer and Epoxy Dispersions – solvent-free dispersions for alkyds, urethanes, epoxy, polyester and more.

**For information on these and other Emerald products visit** www.emeraldmaterials.com.

**STORAGE AND HANDLING: Always refer to our Material Safety Data Sheets for important information about our products. Our engineers are always ready to discuss the storage and handling of any of our products**

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**Emerald Performance Materials Company is a manufacturer of additives and polymers which make your products last longer, look, taste, smell, or perform better. Emerald Specialties Group focuses on providing customers with additives, colors and process aids for food and industrial applications such as coatings, adhesives, ink, graphic arts, paper, textiles, metal working and others. The company has 4 business groups, 8 locations and 700 employees to serve customer needs globally.**

## Contact Information:


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Emerald Performance Materials
Hilton Davis

PHTHALATE-FREE PERFORMANCE SOLUTIONS

# K-FLEX®

Emerald Performance Materials™
Kalama Chemical

**K-FLEX® plasticizers** are an excellent phthalate-free solution for formulators looking to satisfy both legislative requirements and consumer demand. K-FLEX plasticizers offer equal or superior performance over other recognized plasticizers and coalescents in a wide range of applications including adhesives, caulks, sealants, coatings, and vinyl/plastisol applications.

- Phthalate-free
- Non-SVHC
- Food contact approvals
- Low–VOC
- Biodegradable
- REACH Compliant
- Compatible in wide range of polymers (PVAc, EVA, acrylics, styrene-acrylic, PVC, cellulosics, nitrile rubber)

| Benefits in Coatings | Benefits in Caulks and Sealants | Benefits in Adhesives | Benefits in Vinyl Plastisols | Benefits in Vinyl Melt Compounding |
|---|---|---|---|---|
| Gloss | Good tack-free time | Chalk point/ Tg suppression | High solvator | Quicker drying & faster fusion at lower temperatures |
| Clarity | Can be used in | Extended open & reduced set times | Increased line speeds | Efficient softening vs. some GP types |
| MFFT/Tg suppression | Formulations including nonspec, AST C920, and ASTM C834 | Wet tack | Lower gelation/ fusion temp. | Excellent stain resistance |
| Scrub resistance | Excellent compatibility in wide range of polymers such as acrylic, PSU, and MS Polymers | Excellent viscosity response | Higher fused gel strength | Extraction resistance to oils & aliphatic solvents |
| Water resistance | | Improved dry film resistance to oil, grease and water | Improved stain & extraction resistance | Good UV & heat stability vs. other high solvators |
| Hardness | | Excellent compatibility | Excellent wear layer toughness | Excellent compatibility with PVC/other GP plasticizers |
| development | | in wide range of polymers & formulation systems | Good gloss | |
| Compatibility in a wide range of polymers and formulation systems | | | | |

## Ask us about our wide global inventory status.

Emerald Kalama Chemical is business unit of Emerald Performance Materials, a manufacturer of additives and polymers that make your products last longer, look, taste, smell, or perform better. Kalama is a world-scale producer of a variety of toluene oxidation products, including benzoic acid, and various benzoate and dibenzoate ester, alcohol and aldehyde derivates for food preservatives, antimicrobials, aroma chemicals, flavor ingredients, plasticizers for adhesives, vinyl, sealants & caulk, coalescents for coatings and a wide range of industrial applications.

## Products Available

**K-FLEX® 850S** – Classic dibenzoate blend based on DEGDB and DPGDB optimized for waterborne latex applications. In coatings, K-Flex 850S is low in VOCs to assist the formulator on issues of VOC reduction. Other applications include use in polysulphide & acrylic systems. This product is not recommended for PVC applications. In the EU, K-Flex 850S is label-free.

**K-FLEX® 850P** – Dipropylene glycol dibenzoate (DPGDB) and diethylene glycol dibenzoate (DEGDB) blend specifically designed for vinyl applications with economy as a focus. As a high solvator for vinyl it can be formulated alone or in blends for plastisols as well as melt compounded vinyl.

**K-FLEX® 500** – DPGDB and DEGDB blend in a ratio of about one to one by weight. A polar plasticizer that is a high solvator for PVC applications. Also compatible with polar polymers such as polyvinyl acetate.

**K-FLEX® 500P** – New product from our R&D team. Blend of DEGDB and DPGDB, slightly rich in the DEGDB component. Designed for coatings or other applications where ultra-low levels of VOCs are desired.

**K-FLEX® 975P** – Patent-pending blend of DEGDB, DPGDB and propylene glycol dibenzoate (PGDB) offers a broad range of compatibility with polar polymers. Due to its lower freeze point, it has better handling properties than other modern binary dibenzoate blends. Applications include coatings, plastisols, latex caulk and sealant uses.

**K-FLEX® PG** – New product from our R&D team. Based on PGDB and specifically designed for vinyl applications. A very high solvator making it particularly useful in blends of plasticizers to tailor characteristics and end-performance. Excellent stain resistance & durability.

**K-FLEX® DP** – DPGDB is one of the most versatile polar, high solvating plasticizers. Compatible with a wide range of polar polymers, rubbers, including TPU. Excellent pigment carrier in various masterbatch systems.

## Typical Physical Properties

| PROPERTY | K-FLEX® 850S | K-FLEX® 850P | K-FLEX® 500 | K-FLEX® 500P | K-FLEX® 975P | K-FLEX® PG | K-FLEX® DP |
|---|---|---|---|---|---|---|---|
| Boiling point (5 mm Hg, °C) | 180 | 180 | 191 | 236 | 215 | 157 | 195 |
| Density, ASTM D1475, 25°C, g/ml) | 1.14 | 1.14 | 1.14 | 1.15 | 1.15 | 1.14 | 1.11 |
| Density, ASTM D1475, 25°C, lbs/gal) | 9.6 | 9.6 | 9.5 | 9.6 | 9.6 | 9.5 | 9.3 |
| Freeze point, °C | 14 | 12 | 6 | 6 | 6 | -30 | -51** |
| Moisture Content, % | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Viscosity, Brookfield RVT, 20 RPMs at 25°C, cps & mPaS | 72 | 76 | 80 | 107 | 73 | 81 | 99 |
| Viscosity, Kinematic, 25°C, cSt | 63 | 66 | 70 | 93 | 63 | 71 | 89 |
| VOC%, ASTM, D-2369 | 2.2 | 1.7 | 2.9 | 0.9 | 2 | 5.8 | 3.2 |
| **FDA COVERAGE** | | | | | | | |
| 21 CFR 175.105 | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| 22 CFR 176.170 | Yes | Yes | Yes | Yes | Yes* | No | Yes |
| 23 CFR 176.180 | Yes | Yes | Yes | Yes | Yes* | No | Yes |

* K-Flex 975P may be used as a plasticizer at a level not to exceed 20% in an adhesive under 21 CFR 176.170 and 21 CFR 176.180, provided the adhesive is separated from the food by a functional barrier, or is limited to contact with food so as not to exceed trace amounts at seams and edges. ** Glass Point by DSC

## Contact Us

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Emerald Performance Materials
Kalama Chemical



# Foam Control for Paints & Coatings

Emerald Foam Control makes a variety of defoamers for the paints and coatings industry. Because every component in a formulation can affect foam characteristics, we recommend that defoamers be screened in the actual paint or coating formulation.

Emerald Foam Control will evaluate defoamers and antifoams in your system and recommend the most cost-effective product. Tests include initial foam control, oven aging, foam under a roller, draw downs with examinations of film irregularities, color acceptance and gloss.

| | | Uses (only for water base systems) | | | | Type of foam | | Applications | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RECOMMENDED PRODUCT | TYPE | Emulsions | Matte finish | Semi-Gloss | High Gloss | Macro | Micro | Grind | Let Down | Polymer | Final Coating | DESCRIPTION |
| **Antarol® L 810** | Mineral oil and wax | X | X | X | | X | | X | X | X | X | Is a cost effective defoamer for use in the emulsion polymerization process being added in any stage of manufacturing. Provides rapid foam knockdown and persistent antifoam performance even after long term storage, easily incorporated and good leveling and defect free surfaces. |
| **Antarol L 837** | Mineral oil, wax, esters and emulsifiers | X | | | X | | X | | | X | X | Is a post addable defoamer designed to eliminate microfoam during the emulsion polymerization process. Provides good leveling and defect free surfaces, eliminates film defects caused by microfoam, easily incorporated and water dilutable and is post addable to control foam during packaging. |
| **Antarol L 855** | Mineral oil, wax and emulsifiers | | | X | X | | X | | X | X | X | Is a highly effective defoamer for use during the emulsion polymerization process. It has excellent defoaming and antifoaming properties in a wide range of polymers. Provides good leveling and defect free surfaces, easily incorporated and very effective in high shear and turbulent systems. |
| **Antarol TS 704** | Mineral oil and wax | | X | X | | X | | X | X | X | X | Is a cost effective defoamer recommended for matte finish and semigloss waterborne architectural coatings providing a rapid foam knockdown and persistent antifoam performance even after long term coating storage, no causes impact on coating appearance. Easily dispersed and can be added at any stage of manufacturing. |
| **Antarol TS 709** | Mineral oil and wax | X | X | X | X | X | X | X | X | X | X | It is a general-purpose recommended for all types of waterborne architectural coatings. Is suitable for all coating types, can be added at any stage of the manufacturing process, has a rapid foam knockdown and persistent antifoam performance even after long term coating storage. Good compatibility and no impact on coating appearance. |
| **Antarol TS 760** | Mineral oil, wax and Silica | X | | X | X | X | X | | X | X | X | It is an easily dispersible defoamer for use in high-gloss and semigloss waterborne architectural coatings and emulsion polymerization. Easily dispersed, can be added at any stage of the manufacturing process and excellent defoaming and antifoaming performance. Rapidly eliminates existing foam and protect against foam generation during the application of a coating. |
| **Antarol Y 400** | Mineral oil, wax and Silica | X | | X | X | X | X | | | X | X | Is an easily dispersible defoamer developed for waterborne adhesives and emulsion polymerization. Provides excellent defoaming and antifoaming performance, particularly effective at eliminating microfoam, easily dispersible and can be added at any stage of the manufacturing process. Is particularly effective in adhesives applied by roller coating or curtain coating. |

# Paints & Coatings

| RECOMMENDED PRODUCT | TYPE | Use | | | Applications | | | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| | | Emulsion Polymerization | Aqueous Coatings | Non-Aqueous Coatings | Grind | Let Down | Polymer/Coating | |
| **Foam Blast® 191** | Organo-silicone | | X | | X | X | | Organo-modified defoamer formulated especially for waterborne paints and coatings. Excellent compatibility with sensitive systems with very good initial knockdown and persistence. Can be used in the grind or letdown. |
| **Foam Blast 198** | Organo-silicone | | X | | X | X | | 100% active organo-silicone defoamer with unrivaled stamina in architectural and industrial grind applications. |
| **Foam Blast 20F** | Silicone | | | X | X | | | 100% active silicone antifoam for nonaqueous epoxy, urethane and acrylate coatings. Effective at very low concentrations, it degasses and imparts internal slip to UV-curable coatings. Excellent for the grind phase of pigmented coatings. |
| **Foam Blast 269** | Organo-silicone | | X | | X | X | | Highly effective foam control additive with good compatibility and exceptional stamina. Recommended primarily for addition in the pigment grind phase. |
| **Foam Blast 301S** | Mineral oil | | X | | | | X | Good general-purpose oil-based defoamer for use in acrylics, polyvinyl acetate, polyvinyl alcohol, neoprene and natural latexes. Effective even after long-term aging. |
| **Foam Blast 307** | Mineral oil/organic | | X | | | | X | Fortified nonsilicone defoamer for use in architectural and industrial coatings. Imparts rapid bubble break and maximum persistence. |
| **Foam Blast 338** | Synthetic | | X | | | X | | Synthetic, 100% active organic defoamer for use in the letdown phase of waterborne coatings. Contains no mineral oil or silicone. Excellent for use in sensitive clear or pigmented coating systems. |
| **Foam Blast 383** | Organic | | X | | | X | X | 100% active organic defoamer that provides rapid bubble break and excellent persistence in paints based on synthetic latexes. Exceptional in-can aging and minimal color development problems. |
| **Foam Blast 384** | Organic | | X | | | X | X | Highly effective defoamer that provides maximum economy in controlling foam in paints based on synthetic latexes. Provides rapid bubble break and smooth films, free of fisheyes and craters, when rolled out. Excellent persistence. |
| **Foam Blast 384E** | Emulsified oil/organic | | X | | | X | X | Emulsified oil and organic blend for use in waterborne paint in the letdown phase. Provide superior bubble break on rollout. Good in-can aging persistence and minimal effect on gloss. Good for nonpigmented coatings. |
| **Foam Blast EPD** | Organic | | X | | X | X | X | Excellent defoamer for architectural paints and coatings. Can be added during the grind or letdown phase to provide rapid deaeration, fast bubble break and good persistence. Especially suitable for acrylic-based coatings. |

Emerald Performance Materials
Foam Control


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# CVC Thermoset Specialties

## We Offer

- Products that deliver enhanced performance
- Application and technology expertise
- North American ISO-certified facilities
- Global service with regional distribution partners

## Our Legacy

CVC Thermoset Specialties' RLP Products are a unique, proprietary technology originally developed by BFGoodrich, which enhance performance in a wide array of technically challenging end-uses around the world. The product family had been sold for many decades under the Hycar® tradename by predecessor corporations – BFGoodrich, Noveon and Lubrizol. Following the formation of Emerald Performance Materials in 2006, the products were rebranded as Hypro™ Reactive Liquid Polymers.

Prior to its acquisition by Emerald Performance Materials in 2008, CVC Specialty Chemicals had been creating and manufacturing specialty epoxy resins since 1982. Over the years, the company expanded its product offerings to coatings and adhesive formulators with the acquisition of the specialty epoxy resin line of CL Industries (Georgetown, IL) and substituted urea accelerators from Omicron Chemical. Manufacturing and R&D capabilities were enhanced by the 1995 purchase and subsequent expansions of the Akzo Chemical plant in Maple Shade, NJ.

## CVC Thermoset Specialty Product Lines

- **Specialty Epoxy Resins**
- **Reactive Liquid Polymers**
- **Elastomer-modified Epoxy Resins**
- **Monomers and Modifiers**
- **Catalysts and Accelerators**

## EPALLOY™ Specialty Epoxy Resins

Improved chemical resistance, thermal performance, modulus, cure speed, and UV stability over other standard resins for coatings, composite, and adhesive applications. Technologies include Epoxidized Phenol Novolacs, Resorcinol Modified Novolacs, Bis A Modified and Cycloaliphatic Epoxy Resins.

CVC Thermoset Specialties

**An Emerald Performance Materials Company**

## Hypro™ Reactive Liquid Polymers

Addition of our innovative Hypro™ Reactive Liquid Polymers (RLP) to your thermoset resin formulation will significantly enhance performance such as fracture toughness, low temperature mechanical properties, impact/crack/chip resistance, flexibility and adhesion to difficult to adhere-to substrates. Carboxy, Amine, Epoxy, Methacrylate(Vinyl), Glycidyl Ester and Hydroxy end-functionality allows for crosslinking in a variety of systems. Ideally suited for Epoxy, Vinyl Ester, UPE Urethane and Acrylic Resin Systems. Newer low viscosity epoxy functional grades can be used for glass and carbon fiber reinforced composites.

## HYPOX™ Elastomer Modified Epoxy Resins

Elastomer modification of epoxy resins is a valuable way to further enhance performance features such as: fracture toughness, peel strength, flexibility, low temperature performance, durability and adhesion to non-polar surfaces versus unmodified products. Technologies include Dimer Acid and CTBN Adducts, and Urethane Modified Epoxy Resins.

## ERISYS™ Epoxy Functional Monomers and Modifiers

Monomers are used in epoxy formulations to reduce viscosity and improve handling, processing, and application properties of formulations. Monomers and modifiers also enhance features, such as flexibility and toughness, and maintain chemical resistance and UV stability. Chemistries included Aromatic & Aliphatic Glycidyl Ethers, Glycidyl Amine and Glycidyl Esters.

## OMICURE™ Catalysts and Accelerators

Accelerating the cure speed and/or reducing the cure temperature are important to optimize productivity, energy use, and ultimate physical properties. We offer Dicyandiamide and Boron-Based catalysts for Latent, one-component Heat Cured Epoxy Systems. Substituted Urea catalysts help to accelerate the cure speed and reduce cure temperatures of Dicyandiamide cured formulations and help to optimize productivity, energy use, and ultimate physical properties.

## Emerald Corporation

CVC Thermoset Specialties is a division of Emerald Performance Materials (EPM). EPM produces a broad portfolio of additives and polymers used in diverse consumer and industrial products around the world. Its products play a variety of roles in the products that are consumed and used every day enabling them to last longer, look, smell, taste or perform better. For more information, visit www.emeraldmaterials.com.

| Product Line | | Coatings | | | | | | Adhesives & Sealants | | | | | | | Composites | | | | | | | | | Polymer Modification | | | Electrical / Electronic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Primers – Automotive and Aerospace | Powder Coatings | Flooring and Concrete Coatings | Industrial and Maintenance | Cross-linkers – Overprint Varnish and Other | Topcoat – Automotive Refinish and UV Stable | Mastics and Sound Deadening | Window Sealants | Injection Molded Structural and Pumpable Pastes | Civil Engineering – Floor Joints, Anchor Bolt | Pressure Sensitive Adhesives | Urethane Adhesives | Film Adhesives | Filament Winding – Pipes/Valves/Tanks | SMC & BMC Modification | Aerospace and Recreational Prepregs | Tooling and Stereolithography | Pultrusion | Syntatic Foam Insulation | Wind Energy – Infusion, Hand Layup, Tooling and Adhesives | Resin Infusion – Industrial and Wind | Vinyl Ester | PVC Plastisol Modification | Polyurethane Modification | Potting/Encapsulation | Insulating Varnish – Dip & VPI | Printed Circuit Boards |
| **Reactive Liquid Polymers** | Hypro™ CT Series RLP | | ■ | | | | | | | ■ | | | | ■ | ■ | ■ | ■ | ■ | | ■ | | ■ | ■ | ■ | | ■ | | | ■ |
| | Hypro™ AT Series RLP | ■ | | ■ | ■ | | | | | ■ | ■ | | | | ■ | | | | | | ■ | | | | | | | | |
| | Hypro™ VT Series RLP | | | | | | | | | ■ | | | | | ■ | ■ | | | | | | | ■ | | | | | | |
| | Hypro™ ET Series RLP | ■ | | | ■ | | | ■ | | | | | | | | ■ | | | | | | | ■ | | | | | | |
| | Hypro™ LV Series RLP | | | | | | | | | | | | | | ■ | | | | | | ■ | ■ | | | | | | | |
| | Hypro™ HT Series RLP | | | | | | | | ■ | | | | ■ | | | | | | | | | | | | ■ | ■ | | | |
| **Specialty Epoxy Resins** | EPALLOY™ 8000 Series – Unmodified Phenol Novolac Resins | ■ | | ■ | ■ | | | | | ■ | ■ | | | | ■ | | ■ | ■ | ■ | | ■ | ■ | ■ | ■ | | ■ | ■ | ■ |
| | ERISYS™ RN Series – Resorcinol Modified Novolacs | ■ | | ■ | ■ | | | | | | ■ | | | ■ | ■ | | ■ | | | | | | | | | | | |
| | EPALLOY™ 7100 Series – Bis A Modified Novolacs Resins & Blends | ■ | | ■ | ■ | | | ■ | | | ■ | | | | ■ | | | | ■ | | ■ | ■ | | | | ■ | ■ | |
| | EPALLOY™ 5000 Series – Hydrogenated Bis A Resins | | | ■ | ■ | ■ | ■ | | | | | | | | | | | ■ | | | | | | | | | | |
| **Elastomer Modified Resins** | HyPox™ D-Series Dimer Acid Modified Epoxy Resins | | | ■ | ■ | | | ■ | | | ■ | | | | | | | | | | | | | | | | | |
| | HyPox™ R-Series CT Modified Epoxy Resins | ■ | ■ | | ■ | | | ■ | | ■ | ■ | | | | ■ | | ■ | | | ■ | ■ | ■ | | | | | | ■ |
| | HyPox™ U-Series Urethane Modified Epoxy Resins | | | | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| **Monomers and Modifiers** | ERISYS™ GE 5,6,7 and 8 Series – Aliphatic Glycidyl Ethers | | | ■ | ■ | | | | | | | | | | | | | | | | ■ | ■ | | | | | ■ | |
| | ERISYS™ GE 10 Series – Aromatic Monoglycidyl Ethers | | | ■ | ■ | | | | | | ■ | | | | | | | | | | | | | | | ■ | | |
| | ERISYS™ GE 20 Series – Aliphatic Diglycidyl Ethers | | | ■ | ■ | | ■ | | | ■ | ■ | | | | | | | ■ | | ■ | ■ | ■ | ■ | | | ■ | ■ | |
| | ERISYS™ GE 30 Series – Aliphatic Triglycidyl Ethers | ■ | | ■ | ■ | | | | | | ■ | | | | | | | | | ■ | | | | | | ■ | ■ | |
| | ERISYS™ GE 60 – Sorbitol Polyglycidyl Ether | | | | ■ | ■ | ■ | | | | | ■ | | ■ | | | | | | | | | | | | | | |
| | ERISYS™ GS Series – Glycidyl Esters | | | | | | ■ | | | | | | | | | | | | | ■ | | | | | | | | ■ | |
| | ERISYS™ GA Series – Glycidyl Amines | | | | ■ | ■ | | | | | | ■ | | ■ | | | ■ | | | | ■ | ■ | | | ■ | | | | |
| **Catalysts and Accelerators** | Omicure™ U Series – Substituted Urea Accelerators | | ■ | | | | | ■ | | ■ | | | | | | | ■ | | | | ■ | ■ | | | | | | |
| | Omicure™ DDA Series – Dicyandiamide Accelerators | | ■ | | | | | ■ | | ■ | | | | | | | ■ | | | | ■ | ■ | | ■ | | | | |
| | Omicure™ B Series – Boron-based Catalysts | | | | | | | | | | | | | | | | | | ■ | | | | | | | ■ | | |

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Emerald Performance Materials



**Emerald also provides other performance materials to the coatings industry. Please contact us or visit our website for more information. www.emeraldmaterials.com**

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