



Liquitint[®] Environmental Colorants

The future of environmental color applications is **br**ight.



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Liquitint® Colorants

01. INTRODUCTION

Milliken's cutting-edge Liquitint and Liquitint DR polymeric colorants provide a broad range of color options to highlight safety and community awareness of your snow and ice management products and activities. Through enhanced brand identity, application indication and increased functionality, our soluble colorants allow for easy blending for a broad color space with low inventory requirements. This reduces waste and downtime as well as missed or over applications which ultimately saves you money.

Equally important, our non-staining Liquitint colorants are not formulated with heavy metals during manufacturing. Our colorants are REACH supported and eliminate the hazardous dust associated with powdered dyes and pigments. Milliken's manufacturing standards provide you with superior colorants that boost your performance and keep your customers and employees safe.



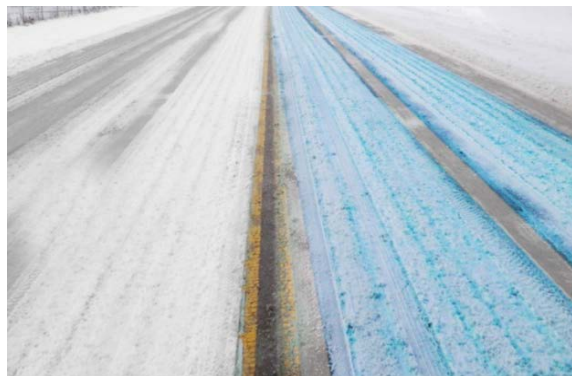
02. MILLIKEN QUALITY

To Milliken Chemical's Liquitint team, high quality is paramount. We measure precise color consistency of Liquitint polymeric colorants using a sophisticated delta E cmc color measurement, offering assurance your products will be the perfect color batch after batch.

- Our design, development and manufacturing processes are [certified to ISO 9001 standards](#) for quality management systems, and our manufacturing locations are [certified to RC 14001](#), the American Chemistry Council's standard combining ISO 14001 and Responsible Care.
- Milliken's manufacturing hygiene, internal microbial testing and product preservation expertise ensure Liquitint Agro colorants are stable and will not contribute any problems in your products.
- Liquitint colorants are not manufactured with heavy metals, reducing environmental concerns as well as compatibility concerns with certain chemical components or manufacturing equipment.
- Liquitint colorants are specifically designed and manufactured for industrial and commercial chemical formulation markets.



03. WHY POLYMERIC COLOR?



ENVIRONMENTALLY CONSCIOUS

Liquitint and Liquitint DR colorants are currently used in a variety of eco-friendly formulations with certifications including the EPA's Safer Choice (SCIL) programs and independent agencies like Green Seal.

Liquitint colorants are soluble in many different materials and not manufactured with heavy metals.



BROAD SPECTRUM OF COLOR SPACE

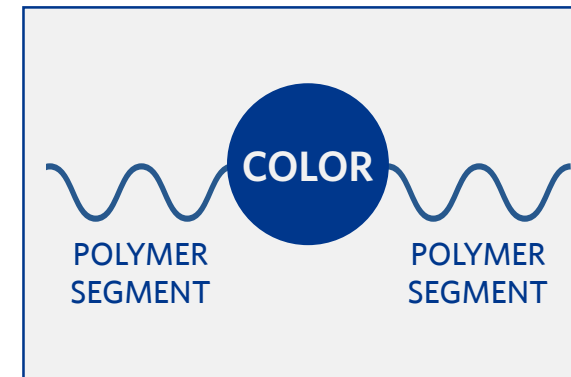
Bright, transparent color can be achieved with an unlimited color space.

Our truly soluble colorants allow for easy blending, spray applications and the possibility of in-line dosing. This eliminates the hazardous dust associated with powder dyes and pigments.



EASY CLEANING & MANUFACTURING

Our team carefully designed Liquitint and Liquitint DR colorants to reduce or eliminate staining on most hard surfaces, skin, fabrics, tanks, and equipment. Even highly concentrated colorants can be cleaned up with water. This saves time and money in a fast-paced manufacturing and application environment. Our colorants are completely free of solid particulates, providing non-settling, non-clogging color for your applications.



CHEMICAL COMPATIBILITY

Liquitint and Liquitint DR colorants allow for the utmost color stability providing a consumer confidence unmatched by powder dyes and pigments.

Liquitint colorants are designed to be compatible with most cationic, anionic, non-ionic, and quarternary systems.





04. IDENTIFICATION

Milliken Liquitint colorants help to identify different types of Ice Melt formulations as well as provide brand identity and product appeal. We offer precision color matching to ensure your brand standards are met with unparalleled color consistency and superior results that your customers will notice.



05. INDICATION

Our Liquitint colorants also help to prevent under- and over-application of ice melt treatments by providing an application indicator. They also help machine operators quickly and easily check levels in tanks, application patterns, and performance of blending, spreading, and spraying equipment.



06. IDEATION

From the R&D lab to the production floor, our experts will be pleased to assist you in carefully formulating new products, reformulating existing products and creating brand extensions. Your customer will notice the difference and recognize the benefits you are providing, and your manufacturing will appreciate the ease of use and flexibility allowed by Liquitint colorants.





LIQUITINT® COLORANTS

07. MULTI-FUNCTIONALITY

In addition to providing excellent visualization during application, Liquitint colorants are completely soluble in brine systems and will help highlight tank levels in yards and on trucks in a range of low to high intensity light situations.



Liquid levels easily determined by using color



08. HIGH VISIBILITY

White salt and colorless brine solutions can make it difficult for applicators to see where they are applying and ensure the equipment is operating properly, especially in whiteout conditions. This brings risk for missed applications or false claims of missed treatments if people are unable to visually confirm the presence of treatment. Liquitint colorants provide completely soluble solutions that will not interfere with equipment as well as high color contrast to quickly and easily show the application of the snow and ice melt treatments.



Without colorant

With colorant



09. COLORIZE ENHANCED FORMULATIONS

Liquitint colorants allow for the coloration of pure salt and brine as well as for more complicated formulations which can include magnesium chloride, calcium chloride, and even beet juice.

Brine Base Solution



Brine
Base

0.2 %
Liquitint
Blue
Solution

0.005%
Liquitint
Blue on
Salt

0.6%
Liquitint
Blue
Solution

0.016%
Liquitint
Blue on
Salt

Brine/Beet Juice Solution



Brine/Beet
Juice Base

Brine/Beet
Juice on
Salt

0.2 %
Liquitint
Blue
Solution

0.005%
Liquitint
Blue on
Salt

0.6%
Liquitint
Blue
Solution

0.016%
Liquitint
Blue on
Salt



10. CUSTOM SOLUTIONS

Our Liquitint colorants allow you to customize the loading levels for your specific needs, while achieving effective coloration for your snow and ice management formulation while using only three primary colors.



LIQUITINT® COLORANTS



Milliken™



11. LEGACY OF INNOVATION

By combining science with design and insights, Milliken tackles the issues and concerns of today. Every day, our community of innovators is invigorated by the challenge of finding creative ways to enhance people's lives and make the world around us safer, more sustainable and more beautiful.

Milliken has led the way for "knowledge-based" investment for over 150 years. Employing over 100 PhDs, we have accumulated over 2,200 U.S. patents - and more than 5,000 patents worldwide - since our founding in 1865.

With 39 manufacturing facilities located in the U.S., U.K., Belgium, France and China, and with other sales and service operations throughout the Americas, Europe and Asia, Milliken's nearly 7,000 associates work to create entirely new customer experiences, build for the future and create products that do good for the world.

Please Note: As each customer's use of our product may be different, information we provide, including without limitation, any regulatory information, recommendations, test results, samples, care/labeling/processing instructions or marketing advice, is provided in good faith but without warranty and without accepting any responsibility/liability. Each customer must test and be responsible for its own specific use, further processing, labeling, marketing, etc. All sales are exclusively subject to our standard terms of sale posted at www.milliken.com/terms (all additional/different terms are rejected) unless explicitly agreed otherwise in a signed writing.





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At Milliken & Company, sustainability is at the core of our corporate culture. Everything we do is driven by a commitment to preserving and protecting the Earth's natural resources and the health and well-being of our associates, customers, communities and shareholders. We believe a healthy enterprise and a healthy earth are vitally linked.

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