

[www.RDCcoatings.com](http://www.RDCcoatings.com)



**YOUR PARTNER FOR SUSTAINABLE,  
ENERGY-CURED COATINGS.**

# COATING SOLUTIONS – FORMULATION TYPES



At RDC Coatings, we specialize in engineering custom coating solutions to enhance your unique processes. Our formulations are designed to perform consistently across a wide range of conditions, optimizing all aspects of your operation. We base our coatings on a comprehensive evaluation of your specific needs, including substrate characteristics, application methods, curing technologies, and finished product requirements.

When your operation engages RDC Coatings to create ultraviolet (UV), Excimer UV, or electron beam (EB) energy-cured coatings and water-based (WB) finishes, you get more than just a custom engineered solution. You also get a partner who is invested in your success. Every RDC coating includes a range of services designed to help your production line maximize productivity and finished product quality while boosting efficiency and throughput.

RDC Coatings is committed to both performance and sustainability. Our curable coatings are environmentally friendly and adhere to global safety and sustainability standards. Choose RDC Coatings for a finish that not only enhances your product's functionality and appeal but also aligns with your commitment to responsible manufacturing.

Whether upgrading your current coating formula or designing a new manufacturing line, RDC provides comprehensive, customer focused expertise. Our process includes:

-  Initial on-site process audits to gain a complete understanding of your production line and assessment of your substrate, application method, curing technology, and finished product.
-  Custom coating formulation development by our expert chemists and engineers based on information collected during the initial on-site audit of your processing line.
-  Rigorous proof-of-concept validation in our state-of-the-art testing labs using various application methods and curing technologies, ensuring high-quality, consistent products tailored to specific customer needs.
-  Ongoing process management and dedicated technical support to optimize production efficiency and coating performance.

# COATING SOLUTIONS – FORMULATION TYPES

Leverage RDC Coatings' 35-plus years of experience in formulating, developing, and manufacturing custom, energy-cured coatings to address the unique needs of your product and process. Whether engineering a new formulation or improving on one from a different supplier, RDC Coatings' team of chemists and engineers are experts at formulating, developing, and manufacturing custom coatings. These include ultraviolet (UV), Excimer UV, and electron beam (EB) energy-cured coatings and water based (WB) finishes. Your custom coating formulation will be crafted to match the specific requirements of your product and application process.



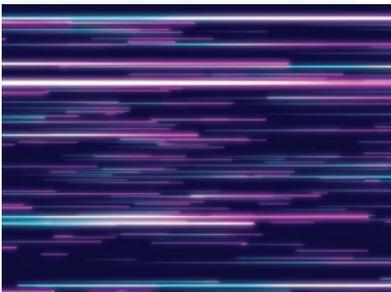
## Ultraviolet (UV) Curable Coatings

Whatever UV lamp technology your production line uses— microwave, gallium, mercury, iron-based, LED, ARC, or any other—RDC can create a custom UV coating to meet your needs. Our highly durable formulations ensure top-notch performance, tailored specifically to your high-speed manufacturing process and product materials. Whether you're working with vinyl, wood, metal, plastic, or any specialty substrate, we'll develop a UV coating that delivers superior results for your unique application.



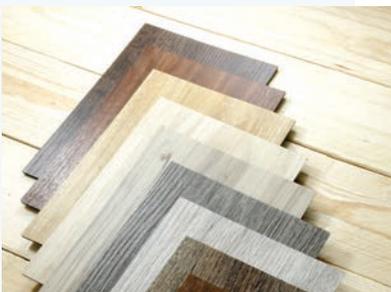
## Excimer UV Curable Coatings

New to the U.S. market, our Excimer UV coatings produce a zero gloss, anti-glare, soft touch surface when exposed to an Excimer lamp. These innovative coatings offer superior chemical resistance and are highly resistant to burnishes, marks, or fingerprints. This makes them ideal for electronics such as cell phones and other haptic-responsive technologies, where both functionality and aesthetics are crucial.



## Electron Beam (EB) Curable Coatings

Our custom engineered electron beam coatings allow for clear and pigmented applications at greater thicknesses, with speeds up to 400 feet per minute. Suitable for vinyl, wood, metal, plastic, or specialty substrates, these coatings offer both high performance and environmental friendliness. Trust RDC Coatings to formulate the EB coating that optimizes your finishing line.



## Water-Based (WB) Curable Coatings

For wood product manufacturers crafting everything from exquisite cabinetry to durable flooring and intricate millwork, we offer a comprehensive, end-to-end coating solution. Our extensive line of water-based wood finishes includes stains, primers, fillers, sealers, and top coats. These products can be used alone or in combination with our UV, EB, or Excimer UV curable coatings for enhanced durability and resistance to scratches, abrasions, and chemicals.

# APPLICATION PROCESS

Optimize the throughput and efficiency of your coating process with RDC Coatings' custom-engineered finishes. Our innovative solutions are designed to excel across a wide range of substrate types and application equipment, ensuring versatility and compatibility with your existing operations. These sustainable coatings are meticulously formulated to produce consistent, even application at high speeds, addressing the ever-increasing demands of modern manufacturing. RDC's cutting-edge ultraviolet, Excimer UV, and electron beam energy-cured coatings represent the pinnacle of coating technology, setting quickly to enable faster line speeds, streamlined processes, and significantly enhanced productivity.

At RDC Coatings, we understand the real-world challenges faced by industrial operations. Recognizing that very few facilities maintain strict climate control, we've engineered our coatings to perform exceptionally well under varying conditions. Your coatings are optimized for uniform, consistent performance amid fluctuating temperatures and humidity levels - from the highest peaks to the lowest valleys - throughout the entire year. This robust formulation ensures that regardless of seasonal changes or daily environmental fluctuations, your coating process remains stable and efficient, providing you with reliable results and peace of mind in your production workflow.



## Spray Coating

Whether your operation is spray coating wood, vinyl, metal, plastic, or a specialty substrate, RDC can custom engineer a premium coating solution that enhances your operation and is tailored to your spraying machinery. Your coating product will allow for hand or automatic spray and enable immediate stacking or assembly. These coatings are designed to meet the highest standards for durability, appearance, and environmental compliance, ensuring a superior finish for your products. Our advanced formulations also offer excellent adhesion properties across diverse substrates. Additionally, RDC's coatings can be customized to provide specialized properties such as chemical resistance, UV protection, or anti-microbial features, further enhancing the value and performance of your finished products.

## Vacuum Coating

When formulating UV curable coatings, Excimer UV curable coatings, EB curable coatings, or water-based coatings for vacuum coating operations, RDC incorporates chemistries that ensure even application. Other key performance factors include strong adhesion to the substrate, a consistent and uniform appearance, minimal drying time, and resistance to chemicals, scratches, and abrasions. Custom vacuum coating solutions from RDC include stains, sealers, and top coats in both 100% solids and water-based formulations. All coatings are engineered to deliver faster line speeds and shorter cure times, supporting higher throughput. Our advanced formulations also offer excellent coverage properties, allowing for optimal film build with minimal material usage, thus improving cost-efficiency. Furthermore, RDC's coatings are designed with environmental considerations in mind, often featuring low VOC content and meeting stringent regulatory requirements across various industries.

# APPLICATION PROCESS



## Roll Coatings

RDC Coatings can formulate a premium roll coating solution that enhances your operation. Roll coatings from RDC include environmentally friendly primer, stain, filler, sealer, and top coat formulations in both 100% solids and water-based (WB) formats. These finishes can also be specified in a wide range of colors and varying degrees of gloss.

Your RDC roll coating's chemistry is specially engineered with optimal rheology to deliver nearly 100% transfer efficiency, providing excellent hold out and a high build look at lower film thicknesses. These custom, energy-cured roll coatings offer exceptional durability that resists chemicals, abrasions, and scratches. Available in a wide range of colors and varying degrees of gloss, RDC's roll coatings are designed to meet your specific needs while ensuring superior performance. With their ability to enhance operational efficiency and product quality, RDC's roll coatings represent a cutting-edge solution for businesses seeking to optimize their coating processes and elevate their finished products.



## Curtain Coating

RDC's environmentally friendly 100% solids UV and EB curtain coatings and finishes are available as both clear and opaque top coats, as well as in "wet-on-wet" base coat / clear curtain coating systems. They can be specified in varying degrees of gloss. Providing nearly 100% transfer efficiency, RDC's sustainable curtain coatings are engineered for high durability, exceptional adhesion, and enhanced resistance to abrasions, scratches, chemicals, and water. Additionally, your curtain coating formulation can be provided in containers sized to meet your operation's needs, increasing your processes' efficiency and productivity.

# SUBSTRATES

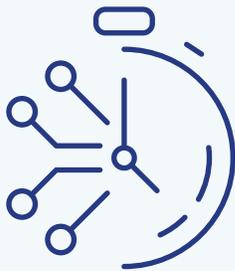
RDC Coatings specializes in custom-engineered, energy-cured solutions for a wide range of substrates including vinyl, wood, metal, plastic, and specialty materials. Our environmentally friendly finishes enhance durability, appearance, and processing efficiency. RDC's coatings offer customizable gloss levels, from high shine to soft-touch matte, and improved resistance to chemicals, scratches, and abrasions. Additionally, RDC Coatings excels in developing custom formulations for challenging or unique substrates, addressing niche markets and specialized applications. This ability to innovate and adapt our coatings to meet specific industry needs sets RDC apart as a leader in custom coating solutions.

For the vinyl industry, we have developed cutting-edge, maintenance-free flooring finishes that boast exceptional durability, ensuring long-lasting beauty and performance in high-traffic areas. These innovative coatings not only enhance the aesthetic appeal of vinyl flooring but also significantly reduce the need for frequent refinishing or replacement. In the wood industry, our specialized coatings deliver excellent transfer efficiency using conventional application methods, allowing for smooth, even coverage that highlights the natural beauty of wood while providing robust protection. These wood coatings are formulated to meet the exacting standards of furniture makers, cabinetry manufacturers, and other wood product industries, offering solutions that combine visual appeal with practical durability.

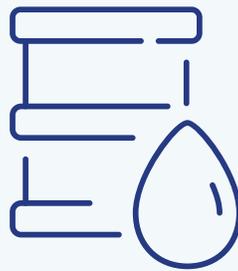
Metal manufacturers benefit from our sustainable finishes designed for a variety of applications, including linear components, flat sheets, and complex parts. These coatings offer superior corrosion resistance, adhesion, and durability, meeting the demanding requirements of industries ranging from automotive to aerospace. For the plastic industry, we develop energy-cured finishes that adhere exceptionally well to various plastic substrates, providing enhanced scratch resistance and UV protection.



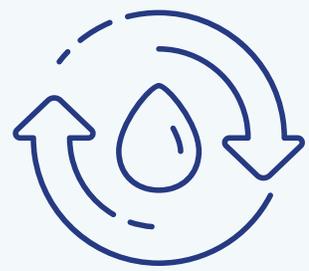
Our energy-cured formulations, utilizing ultraviolet (UV), Excimer UV, and electron beam (EB) curing methods, significantly boost productivity through:



**FASTER  
PROCESSING SPEEDS**



**HIGHER  
THROUGHPUT**



**GREATER  
COATING UNIFORMITY**

# EXPERTISE

## Process Management and Lab Capabilities

Prior to developing a unique coating for your product, RDC's process engineers visit your site to gain a thorough understanding of your existing production line. This line audit gathers crucial details about your application equipment, curing machines, substrate to be coated, and finished product parameters. All of this information is used to recreate your process in RDC's in-house laboratories to test and validate the performance of potential coating formulations.



Additionally, because your coatings are custom engineered to match the parameters of your existing production line, RDC invests the time and resources to gain a thorough understanding of its components and their operation. These process audits occur on a routine schedule, enabling RDC to continuously monitor your finishing line. Should issues arise, RDC is frequently the first solutions partner to identify the machinery malfunction and recommend a course of action. Likewise, RDC offers suggestions for adjustments to current equipment, process, and product parameters to help your operation increase efficiency and productivity. But we don't stop there, we provide training for your personnel in the safe handling and usage of your coating formulations.

## Custom Formulations and Quality Assurance

By understanding and manipulating the properties of the chemistries and materials utilized to create your coating, RDC generates high-performance, sustainable, energy-cured solutions optimized to meet the parameters of your finished product. Each new commercial coating formulation passes through state-of-the-art laboratories at RDC's 35,000-square-foot facility.

As a total quality company, RDC Coatings follows a strict process to ensure consistency among every product manufactured for our customers. Your custom coating will be regularly sampled and examined by our quality control lab to ensure that every batch you receive is consistent. Additionally, at RDC Coatings, we operate with integrity, prioritize transparency, and maintain open communication with our customers regarding any changes to product formulations.

## Solving Challenges

Industries across the spectrum turn to RDC for our reputation in problem-solving. We help companies:

-  Creating coatings that expand the types of energy-cured finishes used on a single production line. This enables the company to offer more products to its customers.
-  Engineer new energy-cured coating solutions that address functional or process challenges.
-  Address issues like temperature and humidity fluctuations or curing technology degradation.



**CONSULTING**

RDC offers consulting services for companies building new production lines or curing processes. Our expert team of engineers and chemists provides recommendations on equipment selection and process optimization.

# SUSTAINABILITY

RDC Coatings is your partner for sustainable finishes that comply with environmental standards and regulations. Environmental stewardship is a primary objective at RDC Coatings. Every custom coating formulated and manufactured by RDC prioritizes protecting and preserving Earth's natural resources, air, and water.



## Five Ways RDC's Energy-Cured Coatings Improve Sustainability

When compared to conventional thermal drying and curing processes, applying UV and EB curable coatings on substrates such as wood, vinyl, plastic, or metal is significantly more Earth friendly.

1

### Energy Savings

Because UV and EB curing occurs at room temperature, their energy consumption is at least 50% less than thermal methods, such as gas- or electric-powered ovens.

2

### Lower GHG Emissions

UV and EB curable coatings contain low or no volatile solvents, which contribute to air pollution and greenhouse gas emissions.

3

### Carbon Reduction

UV and EB technologies can reduce an operation's Scope 1 carbon footprint because they don't require use of natural gas or solvent oxidation to cure the coating. Additionally, they use less energy, which reduces Scope 2 emissions.

4

### Space Savings

UV and EB systems can cure a coating at higher speeds and in a much smaller space than the square footage required by large, gas or electric-powered ovens.

5

### Product Durability

UV and EB curable coatings resist scuffs, scratches, abrasions, and chemicals, extending the usable lifespan of the product to reduce waste.

## Your Partner for Sustainable, Compliant Radiation Cured Finishes



All RDC UV curable finishes are environmentally friendly and comply with globally accepted safety and sustainability standards, including...



Low or No Volatile Organic Compounds (Low-VOC/Zero-VOC)



California Air Resources Board (CARB) Compliant



American Innovation and Manufacturing (AIM) Act Compliant



Meets or exceeds American National Standards Institute (ANSI), Kitchen Cabinet Manufacturers Association (KCMA), and Scientific Equipment and Furniture Association (SEFA) Testing Requirements



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