



**One Roof For Life.**

## Fluid-Applied Roofing Systems

More than “just” coatings, Quest Construction Products manufactures robust roofing systems that effectively seal, waterproof, and maintain your roof for the life of the building. Quest offers a complete array of solutions to preserve and protect both new construction and existing structures.

Explore the brochure and visit us online at [quest-cp.com](http://quest-cp.com).

### APPLICATIONS

#### New Construction

#### ReRoof:

- Asphalt
- Concrete
- EPDM
- Spray Foam (SPF)
- Metal
- Modified Bitumen
- PVC
- TPO



## ABOUT THIS GUIDE

Roofing has been a critical component of construction throughout history. In recent decades, advances in technology have created solutions that last longer, cost less, withstand harsh elements, and generate less environmental waste. Fluid-applied roof systems from Quest Construction Products provide a reliable roof system that will last the life of the building and meet 21<sup>st</sup> century needs. This brochure discusses:

- The Definition of Fluid-Applied Roof Systems
- Why Fluid-Applied is the Best “Cool Roof”
- How Fluid-Applied is Being Utilized
- Why Quest Construction Products is a Great Partner



## ABOUT QUEST CONSTRUCTION PRODUCTS

Quest Construction Products, LLC, a division of Quest Specialty Chemicals, Inc., is a leading manufacturer of protective systems and coatings for the construction industry. We operate two manufacturing facilities, one in Charleston, South Carolina and one in Phoenix, Arizona. Trusted technical sales representatives are positioned throughout North American markets to provide guidance, support, and training to the industry.

Building owners, architects, specifiers, contractors, consultants and property management professionals trust our solutions to protect, preserve, restore, repair and beautify the building envelope and surrounding surfaces. Quest has provided roof systems, coating solutions and pavement coatings covering hundreds of millions of square feet.

Quest Construction Products’ established brands, United Coatings, HydroStop, and StreetBond, have been collectively servicing the industry for over 100 years.

## OUR TRUSTED PRODUCT BRANDS

**HYDROSTOP**



**StreetBond**

**UNITED  
COATINGS**

# What is a Fluid-Applied Roofing System?

## OVERVIEW

One of the most critical components of any structure is the roof. It functions as a shield from harsh external elements. Fluid-applied roof systems are constructed from multiple components working together to preserve the integrity of your building by providing protection from wind, rain, snow, ice, and heat. Once installed and properly maintained, Quest's roofing systems provide a solution that will last the life of your building with no more tear-offs. These are customized solutions that are built on-site and can be installed over various existing substrates.



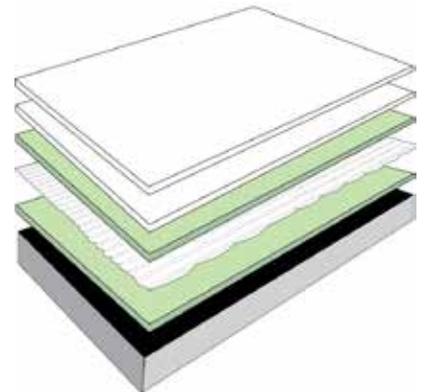
## VERSATILITY

Quest Construction Products offers multiple fluid-applied roof system solutions each designed for specific applications and conditions. These solutions each feature a fluid-applied component that creates a seamless, chemically resistant barrier to external elements. They can be installed over most existing roof types, eliminating the need for tear-offs or installation of recovery boards. No hot kettles, no expensive installation equipment, and no special seaming devices are required. Once installed, periodic maintenance coatings (along with a regular schedule of cleaning) will preserve the roof with no additional steps needed.



## FULLY-ADHERED SYSTEM

The technology behind Quest Construction Products' fluid-applied roof systems is unique. The chemical bond creates a fully adhered membrane that will not separate, break down, or peel. Each component is carefully engineered to be 100% compatible with other components of the system. In addition, future maintenance coatings utilize the same chemistry, so all layers of the system will reliably protect your building for life.



# More Than “Just” a Coating

## WHAT MAKES A SYSTEM?

- Multiple components that create a seamless and self-flashing membrane
- Performance that lasts the life of the building
- Tested and approved as a singular, integrated system
- Warranties that provide security and peace of mind



## COMPONENTS

A fluid-applied roofing system is comprised of multiple components that come together to form a fully adhered, seamless, and self-flashing membrane. Each integral part is



carefully engineered to perform under adverse conditions and be fully compatible with the other components of the system. Components may include liquid-applied coatings, spray-applied foams, mesh membranes, or any combination thereof. A true system provides structural stability while preserving and protecting the integrity of the building.

## THIRD PARTY ENDORSEMENTS

Quest roof systems are held to the same standards and requirements as conventional roof materials such as TPO and Modified Bitumen. Compared to traditional roof coatings, roof systems are held to a much higher standard. Testing organizations, including Underwriters Laboratories, Factory Mutual, and Miami-Dade County, test roof systems for their ability to protect a building and its occupants from external elements like fire, wind uplift, hail, water intrusion, and foot traffic.





## LEAK-FREE GUARANTEE

Fluid-applied roof systems are built on-site, forming a fully-adhered, seamless membrane able to withstand hail, foot traffic, wind uplift, and most importantly, water leakage.

## PERFORMANCE

Roof systems are critical to the integrity of any structure. Quest fluid-applied solutions deliver the performance required in any condition. In addition to providing structural stability, the fabric or foam assists applicators in ensuring proper and uniform membrane thickness across the installation.

Once properly installed, the membrane can withstand extreme elements and stresses encountered with typical building movement. The chemical composition withstands the extreme heat of the sun's UV rays, extending the life of the roof and maintaining integrity throughout the service life of the roof.

## PROVEN HISTORY

For over a century, Quest Construction Products' brands have protected and preserved hundreds of millions of square feet of industrial, commercial, and architectural surfaces worldwide. For over 40 years, we have been supplying superior roofing system solutions to the construction industry.



Quest confidently stands behind its roofing systems by means of comprehensive, leak-free warranties.

**Want to see the difference a system can make?**  
See the project on **page 13** →

# One Roof For Life

## TRUE SUSTAINABILITY

- The only roof that lasts as long as the building
- No complicated or expensive maintenance procedures
- Nothing to tear off, reducing environmental waste and associated costs
- Ownership costs much less than comparable roof systems



## LIFESPAN

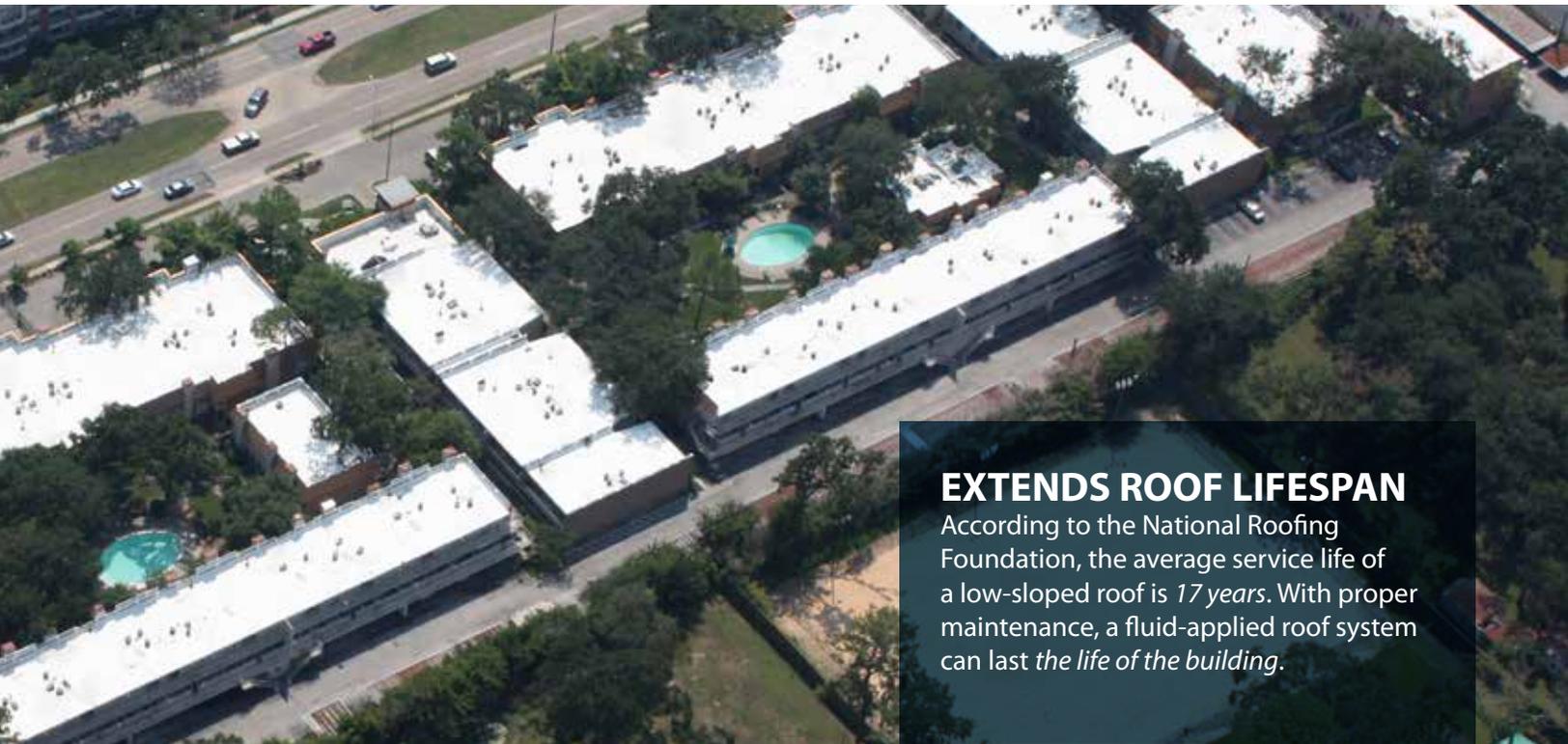
Quest Construction Products' fluid-applied roof systems deliver a protective recovery membrane that extends the service life of both the roof and the building's HVAC equipment. By preserving the existing substrate, Quest's fluid-applied solutions can convert an unsustainable roof to a sustainable roof that lasts the life of the building. Unlike traditional roof materials, Quest's systems are engineered to retain permanent flexibility, ensuring a seamless, watertight membrane that protects leak points with no need for additional accessories.



## EASY TO MAINTAIN

Preserving the integrity of the membrane is as easy as periodic maintenance. Along with recommended annual cleaning, once every ten years (on average) a maintenance layer of the fluid-applied roof system is applied.

By repeating this process in regular intervals, the flexible membrane is maintained, the warranty can remain in force, and the roof will last for the life of the building with no tear-offs. Quest roof systems are therefore truly sustainable systems, requiring only maintenance that requires no special equipment, generates no fumes, and does not interrupt the operations of the building itself.



## EXTENDS ROOF LIFESPAN

According to the National Roofing Foundation, the average service life of a low-sloped roof is *17 years*. With proper maintenance, a fluid-applied roof system can last *the life of the building*.

## COST EFFECTIVE

In any roofing project there are several cost factors to consider: materials, installation, maintenance, longevity and energy usage are just a few. By selecting fluid-applied roof systems, costs are kept to a minimum as they require no expensive equipment and are simple to install. When adding in tear-off and replacement costs of traditional roof systems, the savings are substantial.

Not only are fluid-applied systems cost effective, they minimize the burden on the environment by eliminating tear-offs that send millions of tons of waste each year to the landfill.

## COMPETITIVE COMPARISON

There are many factors to consider when selecting a roofing system. Whether your primary concern is maintenance requirements, occupant satisfaction and safety, or aesthetics, fluid-applied roofing is the solution that addresses all of your needs.

	TPO/PVC	Mod Bit	EPDM	Metal	Fluid Applied
Energy Star Certified	✓			✓	✓
Seamless					✓
Inexpensive installation equipment					✓
Internally plasticized					✓
Aesthetically pleasing				✓	✓
Environmentally friendly				✓	✓
Always fully adhered					✓

Interested in seeing Quest roofing in action?

See the project on **page 11** →

# Cool Roofing

## ENERGY EFFICIENT

- Lower overall cost of ownership including maintenance, energy consumption, and insulation
- Conserve energy by reflecting heat from the building
- Qualify for LEED points and federal and state tax credits
- Maintain color and reflectivity for the life of the roof



## LOWERING COST OF OWNERSHIP

The cost of installation and maintenance are just two pieces to consider in a roof cost analysis and comparison. The type of roof installed impacts the building's energy consumption, repair costs, and the service life of HVAC equipment. All Quest roof systems are available in colors that have been designated as "cool roofs" by the Cool Roof Rating Council. This designation ensures maximum energy efficiency and reduces cost of ownership related to power consumption, HVAC maintenance, and insulation requirements. The building also may qualify for state and federal tax rebates as well as LEED points for sustainability and reflectivity.



## COLOR THAT LASTS A LIFETIME

In order to be designated as a "cool roof", the color of the roof must reflect a certain amount of sunlight and must sustain lower temperatures than other roof colors. However, if the color fades or discolors over time, the reflective properties may decrease, reducing the energy reduction capabilities of the roof and increasing associated costs.

Quest roof systems are engineered to hold their color over time, maintaining reflectivity and "cool roof" status. Along with regular cleaning and periodic maintenance coatings, Quest fluid-applied roof systems not only last the life of the building, they continue to positively, predictably impact the cost of ownership long-term.



## SAVINGS YOU CAN SEE

Energy use represents a typical commercial building's single largest operating expense. Studies show if the roof temperature is reduced by as little as 10°F, HVAC costs can be reduced by 33%.

## THE FIRST LEED GOLD SCHOOL IN TEXAS



Gloria Marshall Elementary is a unique school for Spring Independent School District (ISD) in Spring, TX. It is the first LEED Gold certified school project to be constructed in Texas. The school has photovoltaic cells on top to generate electricity, uses geothermal heating and cooling, and is designed to harvest natural daylight to light the classrooms. It also has an on-site wind turbine, uses collected rainwater to flush toilets, furniture built from trees originally located on the building site, and has a highly-reflective, sustainable Quest roofing system to top it all off.

The Quest fluid-applied system complied with the LEED Gold certification qualifications, including zero-waste construction. The environmentally friendly, water-based elastomeric acrylic comes in reusable, recyclable containers. The rolls of fabric reinforcement are packaged in cardboard tubes, also 100% recyclable. Since the components of the Quest system are water-based, the finished product poses no threat to the school's rainwater collection efforts. The rainwater captured on top of the roof is filtered off and used by the school as greywater to flush toilets.



# Fluid-Applied Roof System Technologies

As the leader in fluid-applied roofing systems, Quest offers several technologies for various geographies, applications, and substrates. Each system includes all of the benefits of fluid-applied roof systems, including sustainability for the life of the building, ease of installation, and durability to withstand harsh elements.

## ACRYLIC ELASTOMER OVER SPRAY POLYURETHANE FOAM



Complete roof systems may be formed using high solids, advanced acrylic elastomer coatings over sprayed-in-place polyurethane foam insulation. **Diathon®** protects the foam from degradation caused by exposure to normal conditions. It is a non-oxidizing protective coating formulated with reinforcing lamina pigments and non-migrating fire retardants, with no added extenders or modifiers. It contains an unsurpassed biocide package that provides maximum resistance to algae and mildew growth.

## FABRIC-REINFORCED ACRYLIC ELASTOMER



Quest offers fabric-reinforced acrylic elastomer systems such as **PremiumCoat®**. These Class 1 roofing systems function both as stand-alone roof systems and as recover systems over a variety of substrates. They are made using the highest quality raw materials and form a flexible, UV resistant compound. The system is fully reinforced with a tough nonwoven polyester fabric, designed for roofing and flashing applications of all types. They are internally plasticized and meet ASTM D-6083 for items such as flexibility, mechanical properties, adhesion, etc.

## ELASTOMERIC SILICONE SYSTEM



Elastomeric silicone systems are created from ultra-high volume solids, pure elastomeric silicone compounds that provide superior weatherproofing, ultraviolet resistance, biological resistance and fire retardancy over polyurethane foam insulation and other appropriate substrates. **Unisil HS** is a single component elastomer that exhibits a rapid cure when exposed to ambient conditions. Long-term elastomeric properties are retained under all types of weather conditions, from sub-zero temperatures to high heat in excess of 250°F (121°C). heat in excess of 250°F (121°C).

# Project Profiles

## MGM Grand Hotel Las Vegas, Nevada

### CHALLENGE

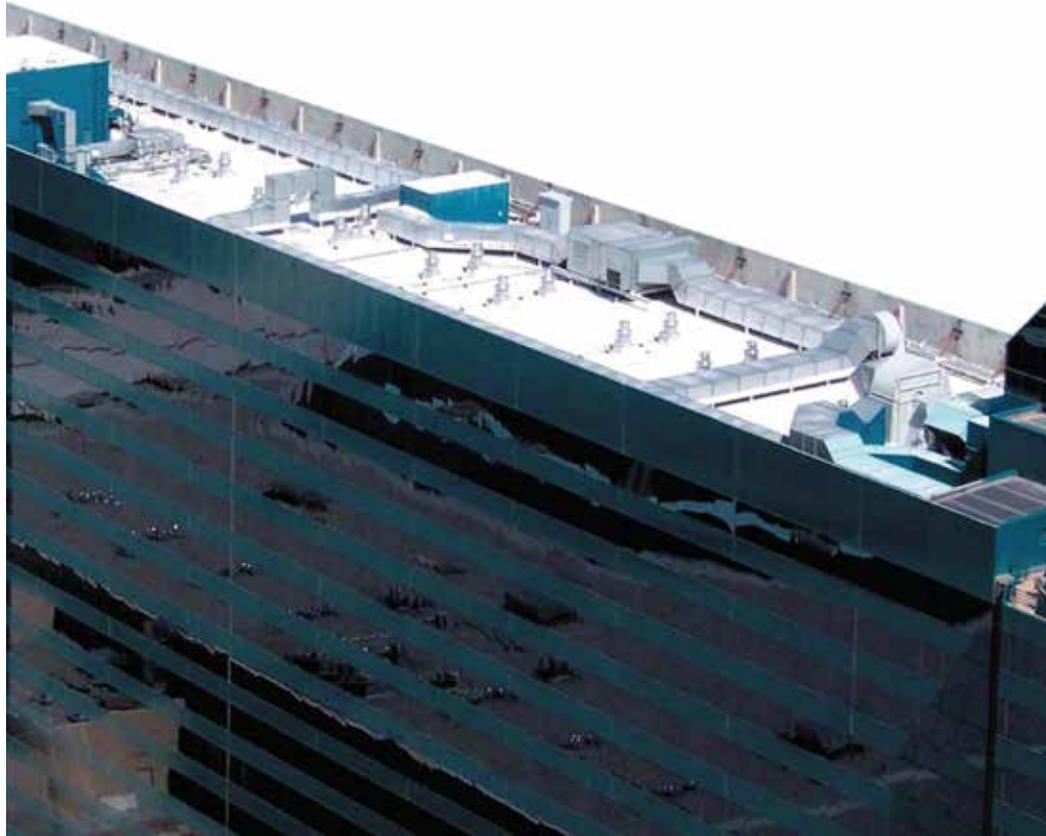
An existing 214,000 square foot EPDM roof needed replacement. High temperatures and heavy maintenance had taken their toll. The large amount of equipment and obstructions made this a very technical, challenging application.

### SOLUTION

Instead of replacing the existing EPDM traditional roof system, MGM chose a Quest fluid-applied roofing system. An insulating layer of spray foam was installed on top of the EPDM, then a protective acrylic membrane, and finally a fluoro-polymer topcoat for dirt pick-up resistance and foot traffic durability.

### RESULTS

Despite all of the potential leak points created by the equipment and obstructions, the fully-adhered, seamless, self-flashing membrane has done its job and maintained its colorfastness years after installation. Regular cleanings and periodic maintenance coatings will ensure that this roof is the last ever installed on this iconic building on the Las Vegas Strip.



### SYSTEM



For this very technical application, a structural, insulating layer of **spray foam** was applied. For sustainability and waterproofing, a protective **Diathon®** acrylic membrane was then applied. Finally, a finish coat of **KYMAX®** provides durability and colorfastness.



## Federal Courthouse Albuquerque, New Mexico

### CHALLENGE

Due to budgetary restrictions, the U.S. General Services Administration (GSA) could not afford to remove the existing roof and replace it with an entirely new one. The existing roof had been consistently leaking, disrupting the work of the judges and other occupants of the building.

### SOLUTION

The pitch pans and roof drains on the existing modified bitumen roof were repaired properly, and then a fabric-reinforced elastomeric acrylic roof system was installed. The fluid-applied nature of the solution allowed the roof, details, and base flashings to all form one seamless membrane and create a leak-free barrier.

### SYSTEM



After proper replacement and repair of the details using Quest roofing products, the **PremiumCoat®** elastomeric acrylic roof system was installed over the existing modified bitumen surface.

### RESULTS

Because the project came in so far under the original reduced budget, the GSA was able to use Quest roofing systems to reroof several additional roof sections as a change order and still remain within budget. Even with the secure nature of the building and the permissions required just to gain entry, a small crew was able to complete the roofing project within the expected timeline.

# Project Profiles

## Tomball ISD Tomball, Texas

### CHALLENGE

When the Tomball Independent School District (ISD) needed to reroof their High School and Junior High School, cost savings and the ability to withstand harsh weather elements were critical. For new construction applications, they required a solution that would allow them to start interior construction as soon as possible.

### SOLUTION

On top of the existing EPS and lightweight concrete substrates, appropriate primers were applied, followed by a fabric-reinforced elastomeric acrylic roof system. For new construction, the same product was installed, and with just the primer installed, crews were able to continue work on the interior construction. This cut the overall construction timeline by 50%!

### RESULTS

Shortly after the Junior and Senior High School were reroofed, Hurricane Ike put the systems to the test. With its sustained 90 MPH winds (and gusts up to 144 MPH), the seamless membrane stood firm. Unlike many structures in the greater Houston area, the Tomball ISD did not experience any leaks or damage to those roofs. When the time came to build a new school, they chose Quest fluid-applied roof systems with full confidence.



### SYSTEM



For both reroof and new construction applications, the Tomball ISD has standardized on using **PremiumCoat®** fluid-applied roof systems over their lightweight concrete substrate.

# Field Support

As part of our commitment to top quality products and environmental sustainability, Quest supports the ongoing training and continuing education needs of the market. We have all the resources needed to help



customers select and specify best-in-class applications for design plans and construction projects.

## AIA/CONTINUING EDUCATION

Quest offers lunch and learns, product informals and is able to provide Learning Unit hours through the American Institute of Architects CES program. Learning Units (LUs) can be earned either in-office, hosted by a Quest Technical Sales Representative, or online.

## SEMINARS & PRODUCT DEMONSTRATIONS

Quest Construction Products' informative seminars and product demonstrations, held throughout the year, are offered in local, regional and national formats to educate and train on the proper application and installation of our roofing systems, coatings solutions and pavement coatings. Seminars provide attendees with a keen understanding of how to successfully promote and install the Quest family of products. Sample topics and information covered include: proper application techniques, precision job material estimation and takeoffs, how to increase your productivity and decrease job material waste, and learning how to increase profitability using Quest solutions.



Quest also sponsors customized product demonstration events that feature individual products from our roofing systems, coating solutions or pavement coatings family of products. Demonstrations are focused on proper product application and installation, aesthetic design, job site productivity, material estimation and take-offs.

## NETWORK OF PROFESSIONALS

Quest takes great pride in providing unmatched technical support. Our Technical Team is committed to helping customers find the right solution for their next project. Strategically located in the markets they serve, Quest's Technical Sales Reps are available to assist customers with specifying, selecting and installing the product that best meets the need of their construction project.



# Factory Support

## R&D/ TECH SUPPORT

Our Research and Development team is recognized as industry experts in elastomeric polymer chemistry and protective coating technologies. Our laboratories and production facilities are among the finest in the industry. We utilize only premium quality raw materials, in combination with state-of-the-art production techniques, to ensure the long-term performance of our coatings systems. Attention to detail in our quality control lab assures our customers of receiving quality they can rely on with every batch.



## FACILITIES

As part of our commitment to service, Quest is proud to service our customers globally via two manufacturing facilities. Our headquarters is located in our eastern facility in Charleston, South Carolina, and our western facility is located in Phoenix, Arizona.



## CONTACT INFORMATION

1465 Pipefitter Street  
Charleston, SC 29405

(800) 739-5566

(843) 745-9600

[fluidapplied@quest-cp.com](mailto:fluidapplied@quest-cp.com)

[www.quest-cp.com](http://www.quest-cp.com)



PremiumCoat®, Diathon®, and KYMAX® are registered trademarks of Quest Construction Products LLC.  
Copyright © 2014 by Quest Construction Products, a subsidiary of Quest Specialty Chemicals, Inc. All rights reserved. Brochure FAR-0214A



## DELIVERING EXCELLENCE IN COATING SOLUTIONS

The Quest Specialty Chemicals (QSC) Family is comprised of several product brand families that bring decades of experience to their respective markets. QSC is engaged in the formulation, manufacturing, and marketing of coatings designed to **repair, restore, and preserve our customers' products and assets.**

With operations headquartered in Charleston, South Carolina, and additional manufacturing and warehousing centers throughout the United States and Europe, Quest serves a variety of industries, including the automotive aftermarket, general industrial, and commercial construction end markets.

QSC's advanced facilities include state-of-the-art research and development capabilities, which drive innovation in technology.

Visit our website at [quest-sc.com](http://quest-sc.com) to learn more.

