

FOR THOSE WHO PREFER  
**PERFORMANCE TO TRADITION.**



**PROPEX**

CONCRETE SYSTEMS

| THE ADVANTAGE CREATORS.™



are some who use traditional methods for concrete reinforcement simply because that is the way things have always been done. Another option is to actively seek technology that will help solve the inherent flaws in concrete and traditional reinforcement. When you pursue this path, you'll discover a global company comprised of people who share your drive for optimized, cost-effective performance.

**Propex Concrete Systems, the world leader in fiber reinforcement solutions.**

At Propex Concrete Systems, we have spent two decades innovating and perfecting fiber reinforcement solutions that offer performance benefits over the entire life span of concrete – from simplifying placement to minimizing cracks in the plastic state to controlling cracks in the hardened state to providing years of exceptional durability. Furthermore, we have distanced ourselves from the inevitable imitators by providing customers with ready access to the most comprehensive array of quality products through the industry's largest distribution network. And, perhaps most importantly, our extensive expertise is equally accessible through our unparalleled customer service and on-site job assistance.

The result is the ultimate combination of world-class concrete reinforcement products and world-class concrete specialists. That is why performance-minded engineers, contractors and ready-mix professionals trust Propex Concrete Systems as the new standard in concrete reinforcement solutions.



## PROPEX CONCRETE SYSTEMS: THE GLOBAL LEADER IN FIBER REINFORCED CONCRETE SOLUTIONS.

With 25 billion square feet (over 2 billion square meters) of concrete placed in homes, offices, schools and manufacturing plants around the world, Propex Concrete Systems is the proven leader in fiber reinforcement. In fact, we pioneered the very concept of fiber reinforced concrete over 20 years ago by introducing original Fibermesh® polypropylene fibers. Focused to improve upon traditional secondary reinforcement, Fibermesh still stands as a benchmark of innovation and quality. Over the decades, our international staff of fiber reinforced concrete specialists have expanded their quest to solve concrete construction's greatest challenges in virtually every application imaginable: slab on ground, elevated slab, poured-in-place walls, shotcrete, precast and more. The resulting solutions have spawned a continually growing list of pioneering firsts, including fibrillated, multifilament and macro-synthetic fibers, as well as engineered blended systems of fibers for multifaceted applications.

Today, Propex Concrete Systems is the world's leading supplier of fiber solutions for concrete reinforcement, with fiber concrete specialists and distributors in every major country in the world. We actively participate in worldwide testing and code approvals to ensure our products meet or exceed a wide range of stringent national and international standards. And our long-standing philosophy of solutions-oriented innovation ensures that you can count on us to anticipate and vigorously fulfill your needs in the future.

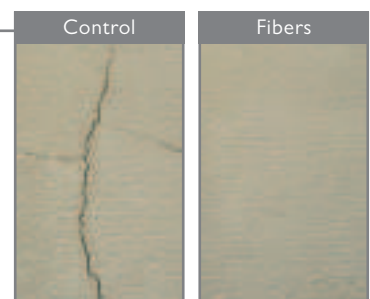


## THE PROBLEMS WITH CONCRETE.

Concrete is widely recognized as a cost-effective, versatile construction material. Yet it is also beset with a number of drawbacks that are inherent to its composition. By generally accepted engineering standards, concrete is relatively brittle and lacks flexural strength. When subjected to the extreme heat of a fire, it is also likely that explosive spalling can occur.

Intertwined with these problems is concrete's propensity to crack in both its plastic (early-age) and hardened (long-term) state. Early-age cracks are microscopic fissures caused by the intrinsic stresses created when the concrete settles and shrinks over the first 24 hours after being placed. Long-term cracking is in part caused by the shrinkage that transpires over the months, perhaps years, of drying that follow. In either case, these cracks can jeopardize the overall integrity of the concrete and not allow it to maintain – or possibly ever attain – its maximum performance capability. **Propex Concrete Systems can provide a solution to all of these problems.**

### PLASTIC SHRINKAGE CASE STUDY



*Conventional wire mesh reinforcement does not function in concrete until the concrete cracks. In fact, for the wire mesh to work properly, it must be placed in the upper third section of the slab. Once microscopic cracking begins, it can lead to visible cracks that undermine the long-term functionality of the concrete. The photos above compare the first 24 hours of curing time between a conventionally reinforced slab and a synthetic fiber reinforced slab. The conventional slab began cracking at 2.5 hours.*



## WE MAKE GOOD CONCRETE BETTER.

Unlike labor-intensive traditional reinforcement methods, Propex fibers are added directly to the concrete mixture and evenly disperse throughout. The result is an advanced, multi-dimensional reinforcement system that can be placed quickly, accurately and safely. Moreover, Propex Concrete Systems offers a diverse portfolio of products that represents the most comprehensive solutions to concrete's shortcomings ever devised by a fiber reinforcement company.

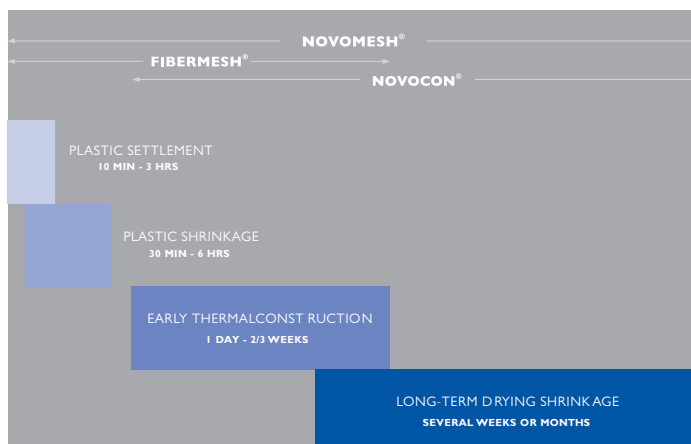
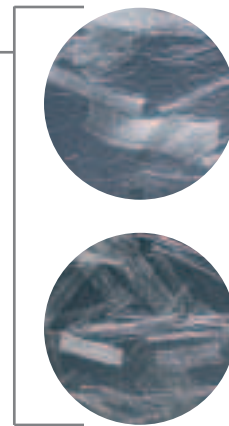


## CHOOSE FROM A RANGE OF FIBER SOLUTIONS.

From early-age cracking to long-term durability, Propex Concrete Systems offers a wide range of fiber reinforcement products, each meeting a specific set of design specifications. Generally, all of our products fall into the following four categories:

### FIBERMESH®: MICRO-SYNTHETIC FIBERS

Expressly formulated to address early age cracking problems, Fibermesh micro-synthetic fibers prevent 80-100% of all cracks in the plastic state – precisely when most cracks occur. During the plastic settlement phase, the fibers create a three-dimensional support network that resists the downward pull of gravity, thus keeping aggregates in suspension and promoting uniform bleeding. This network increases the tensile strain capacity of concrete during the plastic shrinkage phase as well. Another advantage of polypropylene fibers is their ability to mitigate the explosive tendency of concrete during fires, because they melt and relieve volatile steam pressure in concrete. Even finishing Fibermesh products is easy. In applications where aesthetics are especially important, you can choose a Fibermesh product that provides a virtually invisible finish. In sum, it is clear why Fibermesh remains the world's most specified concrete reinforcement fiber, year after year.

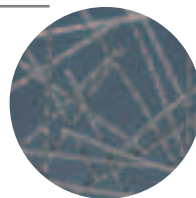


### A FIBER PRODUCT FOR EACH CRACKING PROBLEM.

Micro-synthetic fibers are effective in controlling early age cracking and steel/macro-synthetic fibers are effective in controlling long-term drying shrinkage cracking. The combination of both steel and polypropylene fibers in our Novomesh® system provides protection against early and long-term cracking in one package, thus enabling the concrete to develop its optimum integrity and performance.

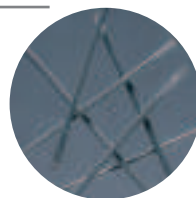
## ENDURO®: MACRO-SYNTHETIC FIBERS

Representing a quantum technological leap in fibers, our high performance polymer macro-fibers are made from a revolutionary material that offers the long-term performance of steel fibers at a lower dosage rate. The unique sinusoidal, wavelike shape of each fiber serves to anchor it firmly within the concrete. At the same time, the design of the fibers allows for addition at a much higher rate per unit volume, infusing the concrete with added levels of toughness, energy absorption and durability. In addition, macro-synthetic fibers provide an added measure of crack control without the risk of corrosion associated with steel. When used in shotcrete applications, these high-tech fibers provide increased adhesion, so you'll not only experience less rebound and waste, you will be able to apply thicker layers of concrete in one pass.



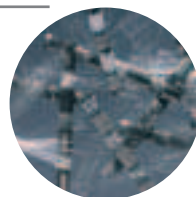
## NOVOCON®: STEEL FIBERS

Engineered for long-term performance in demanding industrial applications, the Novocon line of products is specifically designed to enhance concrete in its hardened state. Industrial concrete floor slab systems are often required to perform under intense loading conditions, including point loads from rack legs and dynamic loading from vehicular traffic. The uniform distribution of steel fibers throughout the concrete mix transforms concrete into a more ductile composite material that increases the energy absorption capability of the slab. Additionally, it provides superior crack control and maximum load stability at the floor joints, where it is most needed.



## NOVOMESH®: BLENDED FIBERS

Another Propex Concrete Systems first, blended solutions are a combination of micro-synthetic fibers and either macro-synthetic fibers or steel fibers. The resulting Novomesh family of products represents the best possible solution to concrete's intrinsic flaws throughout its life span. As previously noted, Fibermesh® fibers excel at controlling cracks in the early stage, while Novocon fibers provide outstanding crack control in increased load-bearing situations. With a blended solution, you receive both advantages in one amazing package. Some Novomesh products contain an engineered mix of polypropylene fibers and high performance steel fibers, ideal for commercial slab-on-ground and composite metal decks. Other products combine macro-synthetic fibers with micro-synthetic fibers for a strong-as-steel solution to temperature shrinkage and flexural reinforcement.



Propex Concrete Systems fiber reinforcements benefit all concrete applications and have been used in every application imaginable for more than 20 years, including:

- Composite metal decks
- Commercial slabs
- Industrial slabs
- Residential slabs
- Vertical walls
- Stamped & colored concrete
- Shotcrete
- Tunneling/Mining
- Tilt-up construction
- Marine construction
- Precast concrete
- Pavements/External slabs
- Overlays

## CONTINUING OUR TRADITION OF INNOVATION.

Propex Concrete Systems pioneered the creation of fiber reinforcement more than 20 years ago. In recent years, customers have discovered the unique advantages of our e3® technology. This patented breakthrough enables us to engineer our fibers three ways: length, thickness and mix ratio. Together, these three properties enhance Propex fibers by facilitating a faster dispersion in the concrete mix. Another first in fiber reinforcement technology is Propex's Novomesh® engineered blended fiber solutions, which offer both early-age and long-term benefits for the life of the concrete. Today, our introduction of macro-synthetic fibers is being hailed by industry experts as the next generation of fibers. When you consider our R&D department invests more than a million dollars in new product development every year, it's no surprise that our e3 technology, Novomesh blended systems and macro-synthetic fibers are simply the latest on an ever-expanding list of pioneering firsts that is unrivaled in the fiber reinforcement industry. In fact, at this very moment, somewhere in the world, we are conducting performance and development tests at major testing facilities in an effort to anticipate and solve your toughest concrete problems.



## EXTENSIVE TECHNICAL SUPPORT.

Our global network of fiber reinforcement engineers and specialists are among the most knowledgeable in the industry, with practical experience in the complete range of concrete applications. Our technical service professionals are always available to help you achieve the most economical and functional concrete solution for your needs. You can depend upon our assistance in designing, specifying and constructing your next project, even if it requires on-site technical presentations, participation in design meetings or personally overseeing your first placement.



## WE'RE MUCH MORE THAN A FIBER SUPPLIER.

Why do we go to such great lengths to offer you our expertise? Because at Propex Concrete Systems our mission is to be considered as your trusted business partner. While others simply sell fiber products, we seek to offer you both concrete performance and professional success.

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