

STRUX® 90/40

Synthetic Macro Fiber Reinforcement

A new, world-class hospital builds in quality from the ground up.



The Saint Joseph Regional Medical Center at Edison Lakes under construction.
Mishawaka, Indiana.

With its bold design rising above the New Edison Lakes Medical Campus in Indiana, the new, world-class Saint Joseph Regional Medical Center is designed to maximize patient safety and operational efficiencies. Safety and efficiency were also top-of-mind in the facility's innovative construction, starting from the ground up with each of the hospital's seven steel decks. That's why rather than traditional

concrete deck construction using welded wire mesh, the project's engineer, Andrew Gayer of HOK, specified STRUX® 90/40 synthetic macro fibers. STRUX not only met the specification values, but was the first approved synthetic macro fiber reinforcement that met the 2-hour UL listing requirement for steel decks.

"I've used synthetic fibers before with great success, and when I learned STRUX was UL approved for use on composite decks, it was an easy choice," said Gayer. "Welded wire reinforcement is never in the right spot. People step on it, it moves, it doesn't do what it's really intended to do. With STRUX the fibers are uniformly dispersed, so you get a much better reinforcement matrix in the slab than wire can ever provide. STRUX isn't just a better product, but lower cost, too – a good example of value engineering really working."

"The job went great. STRUX was easy to use and gave us a boost in timing on every pour – giving us an earlier start on other aspects of the job. I'd use it every time if I could."

Joel Gonzales
Mortenson/Tonn & Blank, a joint venture

Working closely with the general contractor, Mortenson/Tonn & Blank, and Grace Construction Products, a mix utilizing STRUX synthetic macro fibers was designed for approximately 780,000 square feet of concrete including the hospital's seven composite decks, topping slabs and the basement's slab on grade.

"Using fibers is safer and eliminates the slips and trips caused by wire mesh," said Joel Gonzales of Mortenson/Tonn & Blank. "And STRUX made our placement go so much faster. There were times we had a one-day turnaround between the iron workers finishing and concrete placement – we didn't have to spend days placing welded wire mesh."

The concrete contractor, Phil Butterfield of Christman Constructors, also saw time and money savings working with STRUX. "We didn't have to deal with cranes to get the wire mesh up on the decks, scheduling issues, guys waiting," he explained. "I could make a placement every day and saved at least 20 man hours per placement."

The STRUX pumped easily as Butterfield started with 300 cubic yard pours and ramped up to 600 cubic yard pours with the same size



One of the nation's largest applications of synthetic macro fiber construction on steel composite decks, STRUX® 90/40 was used in place of welded wire mesh reinforcement.



In addition to eliminating the time, cost and safety concerns associated with welded wire mesh reinforcement, STRUX placed and finished easily while minimizing cracking.

"Using STRUX, we eliminated the safety concerns of working with wire mesh and saved over 500 man hours on the job. It's an excellent product. I can't say enough about it."

Phil Butterfield
Christman Constructors

crew and pump. And the placement went smoothly observed Larry Riddle of Transit Mix, Inc. "While pumping up to seven floors, then horizontally up to 400 feet at 100 yards per hour, there was no balling or plugging," Riddle explained.

From the safety advantages to the cost savings, the ease of placement, crack control and the smooth burnished finish, everyone was pleased with the performance of STRUX. It's a state-of-the-art floor for a new hospital that's designing in quality – at every level.

PROJECT CREDITS:

Owner: Saint Joseph Regional Medical Center, Mishawaka IN

General Contractor: Mortenson/Tonn & Blank, a joint venture, South Bend IN

Concrete Contractor: Christman Constructors, Inc., Lansing MI

Engineer: HOK, St. Louis, MO

Admixtures/Fibers: Grace Construction Products

www.graceconstruction.com/strux

North America Customer Service: 1-877-4AD-MIX1 (1-877-423-6491)

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