

### **COMPOSITE STEEL DECK**

**CFS 150-5 FIBERS** 

SUPERIOR CRACK CONTROL - COST SAVING - FASTER INSTALLATION

Meets ANSI | SDI C-2011



# COMPOSITE STEEL DECK

### CFS 150-5 FIBERS

Steel fibers and composite steel decks have been a match for over 15 years. The Standard for Composite Steel Floor Deck-Slabs (ANSI/SDI C-2011) governs the materials, design and erection of composite slabs utilizing cold formed steel deck functioning as a permanent form and as

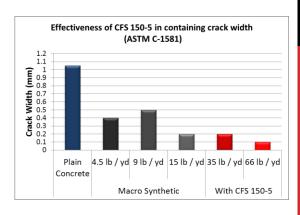


reinforcement for positive moment in floor applications in buildings. Steel fibers are used for temperature/shrinkage reinforcement in these buildings. In these applications, any concrete floor cast on a metal frame and deck system is severely restrained from movement. When the concrete shrinks, the steel frame does not. This restraint causes tensile stress to develop in the concrete, which leads to shrinkage cracks. The SDI recommends three materials to control these cracks. Which is best?

### **Why Choose CFS 150-5 Fibers**

### **CRACK CONTROL**

To quote Dr. Tom Ryan: "It's virtually impossible to keep the WWF near the top of the slab because it gets pushed down by the worker's feet, pump lines, and the weight of the concrete. The fabrics final resting place is usually the top of the metal decking where it is of no value."



Save time and money by using CFS 150-5 steel fibers in these applications. Nothing is better for shrinkage crack control than steel fibers since they eliminate the proper positioning of mesh and its associated costs.

## WHY STEEL FIBERS?

CFS believes that steel fibers are the best means to control shrinkage cracking. We don't just claim this but we will prove it.

Our CFS 150-5 steel fiber:

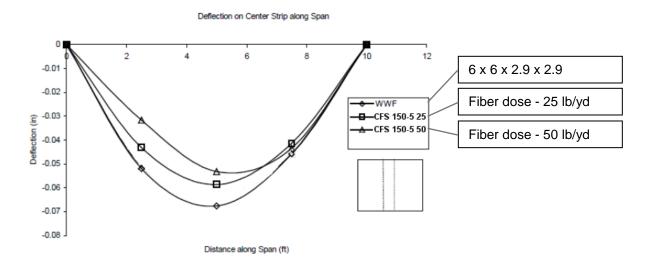
- Meets ANSI/SDI C-2011
- Provides superior crack control
- Is easily pumped and finished
- Saves time and money on the job

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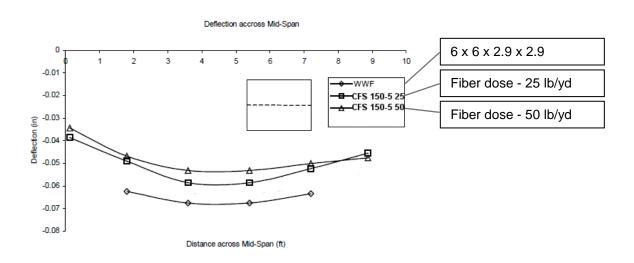
704-571-1323

### **DEFLECTION**

Deflection on composite steel deck applications is always a concern. The more the slab deflects the larger the cracks. With this in mind test were conducted at Virginia Tech to compare the performance between steel fibers and mesh under load. The results: "Results showed that at the same load magnitude and location, the slabs reinforced with steel fibers had smaller deflections and strains than the slabs reinforced with WWF..."



DEFLECTION ALONG SPAN'S CENTER STRIP WITH 10 KIP CONCENTRATED LOAD AT MID-SPAN



DEFLECTION ACROSS MID-SPAN STRIP WITH 10 KIP CONCENTRATED LOAD AT MID SPAN

### **COST**

Time is money in construction. In the time it takes to set the mesh on the deck, concrete with steel fibers could have been placed and finished. There is no labor cost for installation, crane time to get the mesh on the deck or labor associated with keeping the mesh positioned properly.

#### **SAFETY**

One of the leading tripping hazards on deck is the mesh. This is completely eliminated with the use of steel fibers. This not only reduces the potential injuries and insurance claims for the concrete contractor but for all the trades working on the project.



WELDED WIRE FABRIC: CLUTTERED DECK WITH EXTENSIVE TRIP HAZARDS, MESH OUT OF POSITION RESTING ON TOP OF DECK



WITH CFS 150-5: A CLEAN DECK FREE FROM TRIP HAZARDS

### **LEED**

CFS 150-5 is made from re-cycled material. The use of CFS 150-5 steel fibers will go to meeting LEEDS requirements on many projects while providing excellent results.



CFS150-5 is UL fire rated for D700, D800, and D900 series designs.

When designing or constructing your next project using composite steel deck, specify Concrete Fiber Solutions CFS 150-5 steel fiber for the best results and lower costs.



750 West Lake Cook Rd. Buffalo Grove, IL 60089 Tel: 704.571.1323

Email: Mike.McPhee@concretefibersolutions.com