



## UltraFiber 500® Commercial Mixing Instructions

### Introduction of the UF 500® into Concrete

UltraFiber 500® fibers are packaged in the dispersible (water soluble) 1 lb. and 1 ½ lb. bags. Where UltraFiber 500® auto feed dispensers are installed, the fibers come in bulk bags. Introduction of the UltraFiber 500® is generally direct into concrete mixer trucks prior to batching or into central plant mixer during the batching process.

#### Traditional Concrete Mixes:

UltraFiber 500® fibers require moisture and the aggressive physical mixing conditions that traditional type commercial and residential concretes provide. Most of these so-call traditional type concrete mix designs contain at least 50% coarse to fine aggregate (of the total aggregate content). The actual size of coarse aggregate used in these concrete mixes generally range from ½” to 1 ½”. Using ¾” crushed stone will provide the aggressive environment however using ¾” rounded stone may require batch sequence changes.

#### Special Considerations:

If the total coarse aggregate in the mix design is less than 40%, trail mixing will be needed to assure that the UltraFiber 500® can properly breakdown and disperse during normal mixing time and drum revolutions.

Sand mixes, such as grouts, do not provide the aggressive environment to allow the UltraFiber 500® to breakdown properly. Pre-soaking may help but this will need to be evaluated.

Use of clean drums and with mixing fins in good condition mixing is highly suggested.

Caution: Bag Goods - Adding the UltraFiber 500® to packaged dry cement based concrete products that are generally mixed via hand mixing, drill paddle or mortar/drum pull type mixers is not suggested without trial mixing to make sure the mixing action is enough to breakdown the fiber “squares” and properly disperse into the mix.

### **Mixing Instructions:** (Traditional Concrete Mixes)

#### **UltraFiber 500® in water soluble bags (1 lb. and 1 ½ lb.)**

Option A.

1. Add the appropriate number of bags containing the fibers directly into the empty concrete mixing truck
2. Let the mixing truck receive all the concrete ingredients.

- a. There may be need to change sequence of the loading of the truck to accommodate the UltraFiber 500 to breakdown and disperse better
  - b. Suggestion if needed – add ½ of the aggregates, mix for 60 seconds and then complete batching.
3. After all the concrete ingredients have been added, turn the mixing truck for 5 minutes at full mixing speed.

#### Option B

1. Lay the bags of UltraFiber 500® fibers on the aggregate belt so that when it first runs to feed into the concrete mixing truck, the bags of fiber will go into the truck immediately with the aggregate.
2. Let the mixing truck receive all the remaining concrete ingredients.
3. After all the concrete ingredients have been added to the mixing truck, turn the mixing truck for 5 minutes at full mixing speed.

#### **UltraFiber 500® automated dispensing system (bulk UltraFiber 500®):**

##### Transit Mix Plants/Trucks:

1. Turn on the automated dispenser to dispense the UltraFiber 500® fibers into the mixing truck during or immediately following the initial water addition into the mixing truck.
  - a. There may be need to change sequence of the loading of the truck to accommodate the UltraFiber 500® to breakdown and disperse better
  - b. Suggestion if needed – add ½ of the aggregates, mix for 60 seconds and then complete batching
2. Let the mixing truck receive all the remaining concrete ingredients.
3. After all the concrete ingredients have been added, turn the mixing truck for 5 minutes at full mixing speed.

##### For Central Mixing Systems:

1. Add the UltraFiber 500® fibers directly into the central mixer initially with the aggregate.
2. Allow the remaining concrete ingredients to be added.
3. Allow the central mixer to mix as usual.
4. Once the concrete is discharged from the central mixer and into a concrete mixing truck, mix the contents at full mixing speed for 5 minutes.

Note: Depending on the mixing action in the central mixing system, the UltraFiber 500® fibers may already be dispersed properly so Step 4 above could be skipped. This **must be confirmed** by checking the fiber dispersion in the concrete discharged from the central mixer.