



High Tensile Strength Fiber
Reinforcement for Asphalt Pavement

ADDING FORTA-FI® FIBERS AT THE PRODUCTION PLANT

It's nothing new, asphalt producers are routinely being asked to incorporate newly developed mix additives and liquid modifications into their production methods. Warm mix foaming systems, waxes, crumb rubber, recycled shingles, RAP, fractionalized recycled material, and synthetic fibers are used every day around the globe in an attempt to help maximize asphalt performance. FORTA Corporation has developed a variety of ways to introduce their high-tensile strength fiber, FORTA-FI®, into both drum and batch plants during the production process.

FORTA-FI® fiber can be packaged in easy-to-use one pound (1 lb.) polyethylene bags, and added directly 'by-the-bag' into a batch plant, pug mill or at the drum plant through the RAP collar. The dosage rate for the fiber is 1 pound per 1 ton of asphalt mix, (with no change to the job mix formula) which makes calculating the amount of FORTA-FI® being added simple and easy to track over the course of production. Manually adding the fiber is a great way to fiber-reinforce smaller jobs like driveways, parking lots, traffic signal intersections and repair sections.

Fiber may be dosed by-hand into batch plants using compressed air systems, such as the Big Shot® feeder. The Big Shot is easily installed, using 8-inch, schedule 40 PVC. This fiber transport system was designed with toughness in mind, using the most rugged and efficient materials. Most importantly the Big Shot was designed to improve safety while adding fibers into your Asphalt plant. This transport system uses an air vortex (requiring 95 psi and 25 cfm) to create a suction to easily deliver your 1 lb. fibers into your RAP collar.

The "Little Shot" compressed air system may also be used to manually introduce loose fiber directly into the drum plant. The "Little Shot" uses an air vortex ring (w/95 psi air pressure) to blow fiber in 1 lb. increments into the RAP collar or external pug mill. Rigid PVC pipe or flexible tubing may be used to move the fiber vertically from the ground into the production plant

Specially designed mobile automated systems produced by Hi-Tech Asphalt Solutions are used to inject fiber into drum plants for larger production runs. These computer controlled feeders use plant electric power and their own internal air system to effectively dose accurate amounts of fiber for larger tonnage FORTA-FI® projects. The operator controls the fiber introduction rate remotely so it feeds at the correct plant production speed, and these rates are recorded on an SD card to capture the data. In most cases, modifications to the asphalt plant are not required for the use of these heavy-duty feeding units, which can be set-up and moved around with ease at the production facility.

While no two asphalt plants are exactly the same, most producers can deliver fiber-reinforced asphalt to the job site with just a few tweaks to their operation. FORTA Corporation has been involved in hundreds of FORTA-FI® projects around the world, and we will work with asphalt mix designers, producers, and pavers to help them deliver a quality fiber-reinforced pavement to their valued customers.