

Why choose Dramix® 3D?

Thanks to the innovative concept of glued steel fiber bundles, Dramix® 3D is very easy to mix. Dramix® 3D combines a long and thin steel fiber shape with high tensile strength which gives you the best performance. This allows you to apply the lowest fiber dosage for the highest ductility and crack control. With our innovative Dramix® 3D product range, we are the gold standard in steel fiber reinforcement and are widely recognized as a market leader in metal fiber technology. For other specialized applications, we also offer Dramix® 4D and 5D.

Why choose Bekaert?

Bekaert (www.bekaert.com) is a world market and technology leader in advanced solutions with steel wire transformation and coatings. Bekaert (Euronext Brussels: BEKB) was established in 1880 and is a global company headquartered in Belgium, employing more than 25 000 people worldwide. Serving customers in 120 countries, Bekaert pursues sustainable profitable growth in all its activities.

We offer our customers a broad range of innovative solutions specifically designed for construction applications such as plastering reinforcement, ropes and strands for protection systems, etc. Whatever your application, we will work closely with you.

The next success story can be yours!

Feel free to contact us

Would you like to find out how our high-quality steel fibers can work for you? Contact us today! Our sales and service professionals are skilled and responsive, and will quickly serve you around the world.



Bekaert Corporation
1395 S. Marietta Pkwy
Bldg 500, suite 100
Marietta, GA 30067, USA
T 800 372 6940
F 770 426 8107
building.US@bekaert.com
<http://dramix.bekaert.com>

Steel fiber reinforced concrete pipes

Dramix® 3D steel fiber reinforcement offers you:

- A new and innovative product using traditional concrete pipe equipment
- Excellent quality, strength and watertight joints
- An ASTM approved and proven reinforcement solution
- Higher efficiency and overall cost reduction
- A proven track record both in testing to obtain the ASTM standard and utilization in Europe for over 25 years in concrete pipe reinforcement

Why choose steel fiber reinforcement?

Benefits

- Minimal capital investment
- Less production space: no bending, storage or placement of meshes
- Timesaving and cost-effective
- 3D reinforcement equals more durable joints and less rework
- Reduction in maintenance and repair costs
- Galvanized steel fibers for excellent corrosion resistance and durability



The economical solution for high-quality, watertight joints and durable concrete pipes

What does steel fiber reinforcement offer?

Steel fiber reinforcement offers an efficient and cost-effective alternative to mesh reinforcement. By eliminating the labor-intensive process of mesh production and placing, you can save a significant amount of your budget and use your time and resources for what really counts: producing your product. In addition, steel fiber reinforcement offers ultimate flexibility; by utilizing computer-controlled batching and dosing equipment, product changeovers are virtually seamless. Don't change your cage, simply adjust your dosage.

Excellent watertight joints

Thanks to the homogenous distribution of Dramix® 3D in the concrete mix, crack formation is inhibited throughout the entire pipe in all directions, even at the joints. Avoiding crack formation at an early stage is essential for durable and high-performance concrete pipes and joints.

High flexibility during production and installation

Dramix® 3D offers you great flexibility in your pipes. You can easily produce your pipes in a variety of sizes, shapes or joints, without losing the strength of your concrete. When installing your steel fiber concrete pipes, additional junctions and bends can quickly be made with little effort.

Cost-effectiveness

Working with Dramix® 3D steel fibers eliminates the time-consuming mesh production, storing and placing, which allows for more productivity and flexibility when switching to other production lines. Moreover, Dramix® 3D shortens your construction time, making it the most cost-effective reinforcement solution.



Push your productivity to another level with the Dramix® 3D TANKER

- Precise dosing of Dramix® 3D steel fibers
- Increased productivity
- Increased occupational safety
- Bulk deliveries up to 2425 lb (1100 kg)
- Dramix® 3D TANKER 1100: removable tray to easily switch fiber types
- Dramix® 3D TANKER 1500: dosing speed of 330 lb/min (150 kg/min)

ASTM Standard C1765

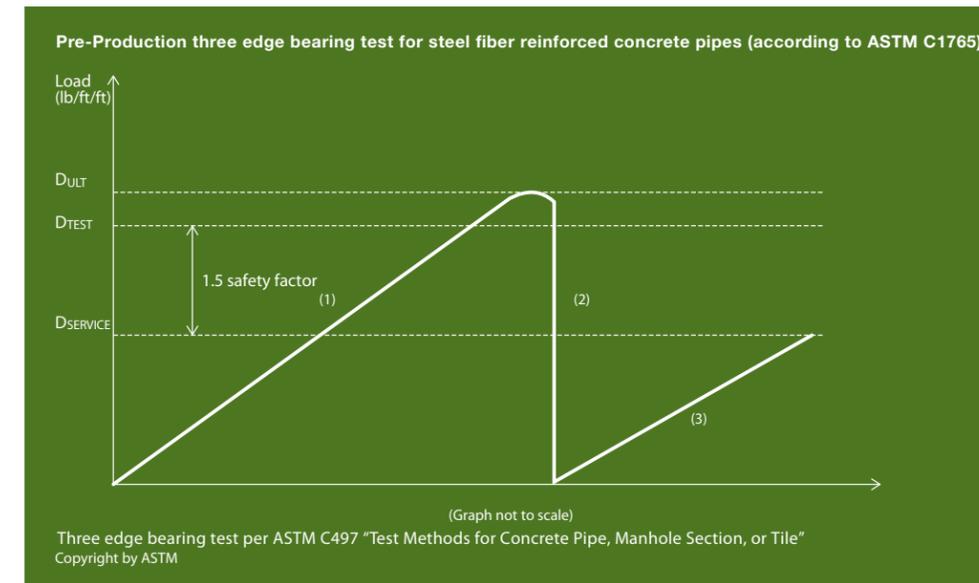
Standard Specification for Steel Fiber Reinforced Concrete Culvert, Storm Drain and Sewer Pipe

The American Concrete Pipe Association and the University of Texas Arlington have performed an extensive series of tests on Dramix® 3D reinforced concrete pipes. This elaborate testing program led to the current ASTM standard C1765. The standard is a performance-based specification and describes test methods for precast concrete pipes.

Stage 1: The pipe is loaded in a three-edge bearing machine to the ultimate strength (D_{ULT}).

Stage 2: The three-edge bearing load is removed from the pipe.

Stage 3: The pipe is reloaded to the service load (D_{SERVICE}) for verification of steel fiber bond and ductility/toughness in the concrete pipe.

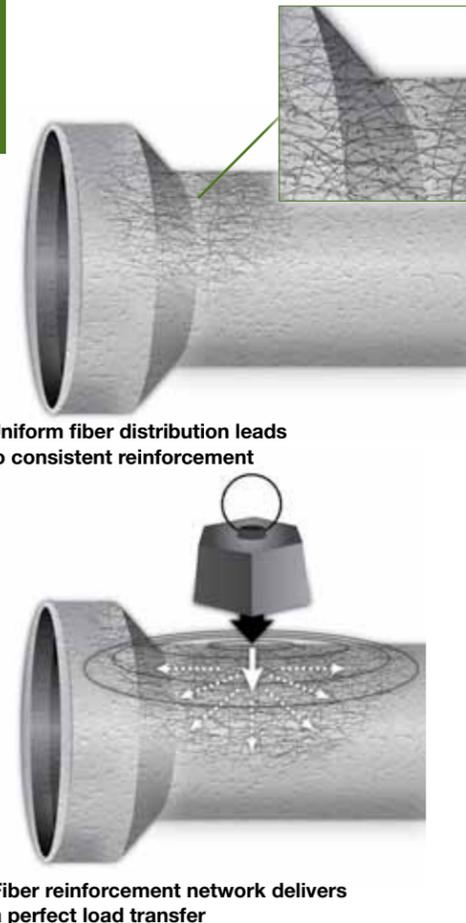


Steel fiber reinforcement vs. traditional reinforcement

- Steel fiber reinforced concrete pipes have to withstand the same loads in the three-edge bearing test as conventionally reinforced pipes. A traditionally reinforced pipe is allowed to exhibit a surface crack in the tensile zones of the concrete at the D_{service} load, with a width not exceeding 0.01 inches over a continuous length of 12 inches (D_{0.01} load for RCP).
- In contrast, steel fiber reinforced pipes have to be reloaded after the ultimate loads, to verify the bond and ductility in the pipe.

Steel fiber reinforced concrete pipes offer you:

- A higher quality level
- Improved joint reinforcement and watertightness



Uniform fiber distribution leads to consistent reinforcement

Fiber reinforcement network delivers a perfect load transfer