

SafeTcrete™ IMPACT

Maximum Performance Fiber

Engineered for Performance

SafeTcrete™ IMPACT is one of our family of next generation fibers. As part of a reinforcing system, it is engineered to provide concrete with flexural strengths and impact strengths superior to any rebar and fiber systems which were previously available to you.

SafeTcrete™ IMPACT achieves this performance through a Patent Pending process in which the fiber surface chemically bonds with the cement paste as the concrete cures. This chemical bond, combined with the high surface area of the interacting fibers, provides a level of protection that has been unavailable with any other fiber / rebar / concrete system.

Applications

SafeTcrete™ IMPACT is an excellent choice for most any commercial or industrial application. These include, but are not limited to:

- Blast resistant and military containment structures
- Transportation and precast infrastructure
- High impact and heavy fatigue applications
- Marine, seismic, and other volatile environments

Benefits

- Increases the force-load energy absorption of concrete, thus its blast and impact resistance, as well as load bearing capacity.
- Reduces crack-induced fragmentation, offering better protection against injury caused by flying debris.
- Optimizes concrete's durability and toughness
- Replaces conventional steel in many applications, saving time and money while improving performance.



SafeTcrete™ IMPACT is a particularly good choice for blast and impact resistant industrial, commercial and residential buildings and in areas prone to severe weather outbreaks or earthquakes.

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Demonstrating Performance

An instrumented drop impact test system was designed to accurately measure the force generated from the freefall impact of a known weight onto unsupported concrete slabs.

The test system was first used to determine optimal fiber length and mixed fiber weight-to-cubic yard of concrete.

SafeTcrete™ IMPACT was then challenged with progressively increasing impact forces. It was evaluated against baseline non-reinforced slabs and against the leading competitive fiber reinforcing system.

Top Right

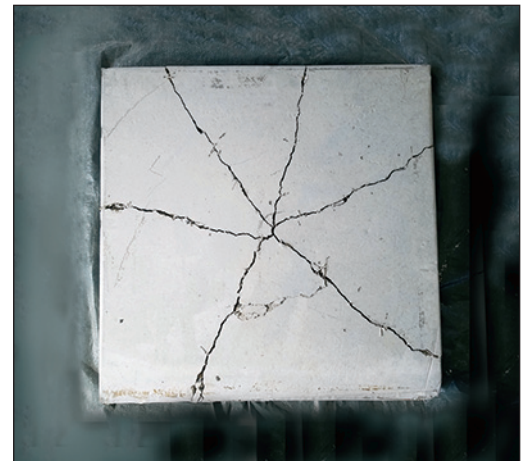
Baseline test shows three inch thick, unreinforced concrete slab after single impact drop test of 12,000 pound force. Result is total slab failure.



Unreinforced concrete slab after a single impact drop test of 12,000 pound force.

Bottom Right

SafeTcrete™ IMPACT reinforced slab after ten impacts of 25,000 pound force, five impacts of 42,000 pound force, and two additional impacts of 62,000 pound force. Slab deflects 1.375 inches--3.5 times greater performance than next best competitive reinforcement!



Slab reinforced with SafeTcrete™ IMPACT fiber after 17 drop test impacts of increasing force. Ten impacts of 25,000 pound force, five impacts of 42,000 force, and two impacts of 62,000 pound force.



Left: SafeTcrete™ IMPACT fiber prior to mixing with concrete.