Cem-FIL® Alkali-Resistant Glass Fibers

Special alkali-resistant (AR) glass fibers have been developed for use with cement-based products (glass-reinforced concrete [GRC], mortars, composite cement, etc.). The fibers are manufactured with Zirconia content in compliance with ASTM C 1666/0 1666/M-07 and EN 15455. AR glass fibers from Owens Corning are marketed as Cem-FIL® glass fiber.

AR glass fibers have been in use for 40 years in more than 100 countries worldwide to create some of the world's most stunning architecture while offering strong and durable performance in widely varying cement- and mortar-based applications, including new and restored building facades, pre-cast components, utility poles, and residential and industrial flooring. In some flooring applications, AR glass fibers can replace the structural steel grid.

AR glass fibers are unique as a concrete reinforcement. They have the same specific gravity as the stone or gravel mixed in concrete so fiber dispersion is easier to achieve than with other fibers.

AR fiber contributes efficiently to tensile strength before concrete is able to crack, thanks to its high elastic modulus and its affinity for and efficient bonding with concrete. AR glass fiber reinforcements can reduce the weight and thickness of concrete by a factor of 10.

The benefits of Cem-FIL® AR glass fiber include:

- Excellent compatibility with cement matrix
- Excellent workability even at high dosage
- Increases chemical resistance (e.g. deicing products)
- Extends long-term durability of concrete
- Does not float or sink in concrete
- Does not entrap air
- Fast and uniform dispersion

Cem-FIL® fibers are manufactured under a quality management system approved as meeting the requirements for ISO 9001. Additionally, the performance of Cem-FIL® fibers has been subjectded to independent assessment and approval in Germany (Zulassung N° Z-3.72.1731), and Cem-FIL® fibers meet the safety standards of European Directive 99/45/EC, 67/548/EEC and their latest amendments.