

# GLASS TEXTILE REINFORCED CONCRETE CRASH BARRIER SYSTEM

A novel prefabricated crash barrier system to enhance the safety of road users

The most popularly used crash barrier is made up of reinforced concrete (RC), which has high rigidity but poor energy absorption. When a vehicle collides with the RC crash barrier, the vehicle is seriously damaged and occupants may be fatally injured due to the impact of collision. To enhance the safety of road users, a pre-fabricated glass textile reinforced concrete crash barrier system (GTRC CRABS) that is flexible, elastic and having the ability to absorb more energy, with appropriate connection mechanism is developed at CSIR-SERC. The single unit of GTRC CRABS is having one-third the weight of conventional precast RC crash barrier and are easy to handle and transport.

## FEATURES / HIGHLIGHTS

- Capable of resisting impact forces and absorbs more energy
- Easily transportable, installable, replaceable / repairable
- Cause less damage to vehicle & less injury to passengers in case of vehicle collision
- Adaptability for use in narrow spaces
- Non-corrosive and highly durable
- Customizable for target impact resistance and energy absorption
- Robust connection method to maintain the integrity in the event of collision



## TECHNICAL DETAILS

- Pre-fabricated GTRC CRABS unit consists of a cementitious binder and layers of alkali resistant glass textiles as reinforcement
- Effective methodology for connecting the pre-fabricated GTRC CRABS to ground and to the adjacent units
- The present design of GTRC CRABS meets the low containment (P2 type) crash barrier requirements as per IRC: 6 (2014)



Static test on single unit of GTRC CRAB



Test on GTRC CRABS at site

## Applications


- Best suitable as crash barrier / median in road highways and also in narrow roads
- Huge potential in national and international markets



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