

Roadstone - leading supplier of building materials

Shotcrete

Shotcrete concrete is a form of sprayed concrete that is pneumatically applied at high velocity through a hand held or machine operated hose and nozzle onto a receiving vertical, inclined or horizontal surface to form a structural or non-structural component.

The relatively dry mix is consolidated by force and develops strength similar to normal concrete. Single or multiple layers can be applied to obtain the desired thickness of concrete. The placing process and amount of rebound material can be refined and controlled by the operator or nozzleman who can vary the amount of compressed air and water at the nozzle prior to the material hitting the surface.

The nature of the process allows for fast placing rates and is ideally suited for complex forms and shapes in confined or challenging conditions. The basic concrete mix is cement rich and usually contains 10-5mm aggregate and sand. The shotcrete's performance and properties can be further enhanced by the addition of fibres, accelerators and colours to the basic mix.

APPLICATIONS

- Slope and excavation stabilisation
- Tunnelling and mining
- Concrete repair and restoration
- Sea defences
- Swimming Pools
- Reservoir, Canal and River lining

Key features and benefits

- Strong and durable
- Reduced shrinkage and lower permeability compared with normal concrete
- Fast placement of concrete on complex shapes
- Placed and consolidated in one process
- Wire fabric reinforcement can be replaced with steel fibre reinforced shotcrete
- A variety of finishes and colours can be applied

Technical specification

- I.S. EN 206 - Concrete Part 1 : Specification, Performance, Production and Conformity
- NRA Specification for Road Works series 1700
- Project Specific Specifications

