

# Clearwater Corporate Office Park

COUNTRY: SOUTH AFRICA  
DATE: June 2017



**PRODUCT USED:** CHRYSO®Durus S400 Macro Fibre

## DESCRIPTION

The Clearwater Corporate Office Park is an A-Grade property, located near the intersection of two major arterial roads in Boksburg, Gauteng. In South Africa, this is the first building to employ the CHRYSO®Durus S400 Macro Fibre. The fibres are an integral component of the screed, which is placed on top of hollow core slabs on each level. The total gross lettable area on the site for all buildings is 17 500 m<sup>2</sup>. Each building is approximately 2 500 m<sup>2</sup> in size and consists of two levels and a full parking basement.

## PROJECT SPECIFICATION

A concrete topping is placed over each hollow core slab; the bottom and middle floors include a 50 mm thick concrete topping, whilst the third floor – the roof – receives a 75 mm thick topping.

## PROJECT CHALLENGE

Due to the large volume of service conduits that had to be installed within the topping, there was a lack of space to use conventional steel mesh reinforcement. CHRYSO® through its association with UK-based- Adfil Construction Fibres and Oxyfibre, was able to offer the design of the structural screed for the hollow core slabs. This specific macro fibre had been selected, as it enhances the durability of the screed by combining the strength of concrete with the flexibility of the polypropylene fibre. Additionally, minimises surface cracking in the concrete.

## CONCRETE SOLUTIONS

CHRYSO®Durus S400 had been added to the concrete mix at the readymix plant which allowed the concrete immediate pumpability. CHRYSO®Durus S400 fibres, allowed the client to remove ref 193 steel mesh reinforcement from the concrete topping, creating more space for the service conduits. This assists in the prevention of cracking whilst enhancing the durability of the concrete topping. Impact resistance is an important characteristic enhanced by the use of CHRYSO®Durus S400, due to the high level of energy absorbed in the de-bonding, stretching and removal of fibres after the cement matrix has cracked. Therefore, the client cut costs and saved time by eliminating the placement and on-site storage of steel mesh reinforcement.

## PROJECT TEAM

■ Contractor: Ludikon ■ Engineer: Echo Group ■ Concrete Supplier: Pronto

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