



# A solution to construction and sustainable development challenges

## Use of challenging sands

The new Quad® admixture solutions deliver the perfect response to use challenging sands and produce concrete meeting your performance criteria.

## Circular economy

The analysis of new supply sources near your manufacturing site allows the implementation of a circular economy approach, by identifying the right admixture solution for the use of local aggregates or recycled concrete aggregates from dismantling.

## Reducing production costs

Optimizing production and sand procurement costs by the use of closer resources, while improving the quality and performance of concrete using complex aggregates and sands.



Visit the webpage



### Chryso Southern Africa

Gauteng Head Office • 26 Malcolm Moodie Crescent  
Jet Park • 1469 • Johannesburg • +27(0)11 395 9700  
[za.chryso.com](http://za.chryso.com)

### Chryso Eastern Africa

Kibhare Centre • Mombasa Road  
Nairobi • Kenya • +254 725 041 526  
[ke.chryso.com](http://ke.chryso.com)



# Enter the circular economy and its virtuous circle



# Challenging sands

## IMPACTS ON CONCRETE PLACING AND PERFORMANCE

Decreasing availability of local high-quality sand leads transporting it from distant sources or using alternative local sand source which creates challenges for reaching the targeted quality of concrete.

### Quad® : A solution for the use of challenging sands.

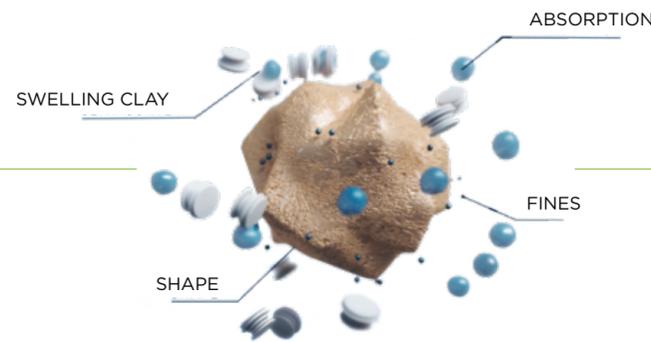
Characteristics and challenges

#### Lack of fines

- Compactness - Porosity
- Slump retention - Bleeding, pumpability issues

#### Excess of fines

- Water / admixture needs
- Slump retention - Pumpability and workability
- Productivity - Mixing time



#### Specific sand shapes

- Water / admixture needs
- Slump retention - Pumpability and workability
- Workability retention
- Productivity - Mixing time

#### Swelling clay

- Water / admixture needs
- Slump retention - Pumpability and workability
- Workability retention
- Productivity - Mixing time

# Because your sand is unique, we offer a tailor made solution

## Excess of fines and/or swelling clay



### Quad® 700 / 800 / 900 Series

#### ENSURES EFFECTIVE BINDER DISPERSION

- Enhances the admixture dosage rate (PCP)
- Increases workability retention

#### REDUCES VISCOSITY

- Improves placing
- Facilitates finishing work

## Lack of fines and/or unfavourable shape factors



### Quad® 400 / 500 / 600 Series

#### IMPROVES CONCRETE COHESIVENESS

- Reduces bleeding and micro-segregation
- Lowers the risk of cracking
- Increases workability retention

#### SIMPLIFIES FINISHING WORK

- Improves aggregate coating

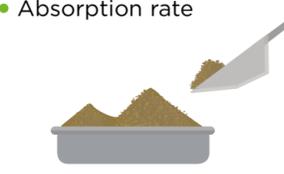


# An innovative and fast service to analyse your sand

## Quad® Lab

### Sand characterisation data:

- Fineness modulus
- Type of sand
- Absorption rate



### Identification of swelling clay: CHRYSO®Clear Test

A leading-edge tool for analysing sand containing swelling clay: CHRYSO®Clear Test

#### Field or laboratory testing

#### Immediate results

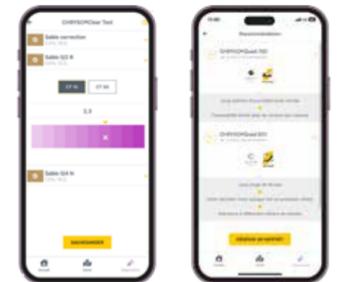


PATENTED TECHNOLOGY

NEW service

## Quad® Lab App

We use the collected data to determine the best Quad® solution to **meet your specific requirements.**



Quad® App analyse new supply sources near your manufacturing site and identify the corresponding admixture solution depending on the required performances.