

AFRISAM'S COMPOSITE TECHNOLOGY PERSONIFIES ITS ETHOS OF CONTINUOUS INNOVATION

AfriSam's C-Tech cements are pushing the limits of composite technology to produce products with exceptional performance characteristics which are also environmentally responsible.

"Our achievements in the arena of C-Tech composite technology personify AfriSam's ethos of continuous innovation, aimed at ensuring that our customers always enjoy the benefits of high performing products," Mike McDonald, manager of AfriSam's Centre of Product Excellence, says. "This methodology is driven by our commitment to support the environment by producing cements with a low carbon footprint.

"Our current C-Tech products are the result of an on-going development process that began in 2000 and is still moving forward, beyond conventional boundaries. The mineral components in these cements have been engineered to make the resultant composite cement far superior to pure cement. These products offer a spectrum of functional attributes that provide our customers guaranteed quality performance."

C-Tech technology reduces the carbon intensive Portland clinker content of cement ensuring that AfriSam cements tread more lightly on the environment. Their mineral components carries significantly less embodied carbon than clinker, effectively reducing the carbon footprint associated with the production process.

In the process, AfriSam is also able to conserve natural resources such as limestone. The use of C-Tech minerals in the manufacturing of composite cements make constructive use of materials from other industries, reducing the need to landfill these materials.

The introduction of engineered mineral components in greater proportions to the clinker presents AfriSam customers with some very interesting performance qualities. For instance, whether concrete is being used on a major construction site or for a D.I.Y. project, good workability is important. To be optimally workable, a cement mix requires less water to reach the desired consistency and consequently achieves much higher strength levels. This improved workability in

AfriSam cements is a result of with C-Tech material technology enhancement and the use of chemical admixtures.

Another superior attribute of these cements is reduced heat of hydration. C-Tech cements typically generate heat over a longer period of time, substantially lowering these thermal gradients and reducing the likelihood of cracking.

The use of fly ash results in a dense concrete matrix that prevents deleterious materials such as aggressive chemicals and sulphate containing liquids from entering the concrete. This resistance to ingress of deleterious elements gives the composite cements their corrosion resistance properties. While any steel reinforcement exposed to chloride ions in solution is prone to corrosion, Ground Granulated Blast Furnace Slag (GGBFS) is known to capture the chloride ions that cause corrosion in steel reinforcement, thereby enhancing the corrosion resistance properties of composite cements.

The finer particles in GGBFS, fly ash and limestone afford composite cements reduced permeability properties. This resistance to water and sulphate penetration from the refined pore structures helps protect the concrete from attack, preventing deterioration.

AfriSam C-Tech cements also contain mineral components that produce superior long term strengths compared to pure cements, where strength gain typically flattens out at about 28 days.

AFRISAM C-TECH PIC 01 : AfriSam's C-Tech products personifies the company's ethos of continuous innovation, aimed at ensuring that its customers always enjoys the benefits of high performing products.

ENDS ... JULY 2014

FROM : CORALYNNE & ASSOCIATES
TEL : +27 011 849 3142
EMAIL : communicate@coralynne.co.za
WEBSITE: www.coralynne.co.za

FOR : MAXINE NEL
AFRISAM
TEL : +27 011 670 5893
EMAIL : maxine.nel@za.afrisam.com

www.afrisam.com