



SOLUTIONS | Case Study

Rapid Compressive Strength gain of 2,500 psi (17.2 MPa) in 3 hours leads to successful wastewater treatment tank repairs.

Cairns Regional Council Vertical Expansion Stormflow Joints Replacement Project

Cairns, Northern Queensland, Australia

Product:

Five Star Structural Concrete® V/O

For information 1-800-243-2206 • FiveStarProducts.com



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Vertical Expansion Stormflow Joints Replacement

Date of Project: September 2017

Project Owner: Cairns Regional Council

Project Contractor: Waterstop Solutions Pty, Ltd.

Project Engineer: Cairns Regional Council

Market/Environment: Wastewater

Substrate: Concrete

Size of Project: 12 x 2m joint replacement

Five Star Structural Concrete® V/O

High 3-hour Strength Gains

A high strength, rapid setting, one component, permanent concrete repair material for vertical and overhead structural repairs.

Produces a repair which is dimensionally stable, develops an integral bond to existing concrete, and restores structural integrity within hours of placement.

Provides increased corrosion protection to steel reinforced structures with migrating corrosion inhibitor technology and very low chloride ion permeability. Moisture sensitive coatings can be applied in 8 to 24 hours.

- Can be troweled vertically or overhead
- One product for thin and thick placement
- Excellent freeze/thaw resistance
- Outstanding corrosion resistance for protection and rehabilitation



Five Star Structural Concrete® V/O applied to repair vertical expansion joint in clarifier.



Joint sealant system installed over Five Star Structural Concrete® V/O.

The Challenge

The joints on a municipal wastewater treatment tank had degenerated to the point where repairing and resealing were necessary. Cairns Regional Council required a product with a fast cure time and rapid compressive strength gains.

Five Star® Solution

Five Star Structural Concrete® V/O was selected due to its rapid set and high early strength gains; it reaches 2,500 psi (17.2 MPa) within three-hours. This rapid strength gain allowed for the repaired joints to be resealed with minimum turnaround time in preparation for the installation of a joint sealant system.

FIVE STAR® SERVICES

- Design-A-Spec™ engineering specification assistance
- Technical on-call center with field and project experienced staff
- Field support representatives for on-site consultation
- Corporate research laboratory available to customize products for unique applications



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For worldwide availability, additional product information and technical support, contact your local Five Star® licensee, distributor, local sales representative, or you may call the Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.

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