

# S L U T I O N S



DAMAGE CAUSED BY BUSES



AFTER REPAIR



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## PROJECT:

*Viva Bus Depot:  
Ontario, Canada*

**OWNER:** VIVA

**YEAR:** 2011

## The Details

PROJECT CONTRACTOR:

Internal

PROJECT ENGINEER:

Internal

MARKET/ENVIRONMENT:

Infrastructure

SUBSTRATE:

Prepared Concrete

PRODUCTS USED:

Five Star® RS Anchor Gel and Five Star Structural Concrete®

SIZE OF PROJECT:

Approximately 3-4 inspection pits were earmarked for repair

**The Challenge** – Repair the extensive mechanical damage to the inspection pits caused by the buses.

**The Solution** – Five Star® RS Anchor Gel, known for its rapid setting and excellent adhesion properties, was then used to secure replacement reinforcing.

Formwork was then erected around the areas to be repaired and Five Star Structural Concrete® was used to do the structural repairs. Five Star Structural Concrete® was applied by means of the form and pour method.

A final protective coating was applied to provide further protection to the inspection pit walls.



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# PRODUCT SOLUTIONS

## Rapid Set Epoxy Gel Adhesive

### RS ANCHOR GEL

Five Star® RS Anchor Gel is a rapid setting, two component, 100% solids structural epoxy for anchoring rods, bars and bolts in concrete, as well as filling cracks and setting ports for epoxy injection. This product is a non-sag, moisture insensitive epoxy adhesive that can be used for both vertical and horizontal installations and is an excellent, rapid set epoxy ideal for use on steel, concrete and masonry applications. This system offers chemical resistance, excellent adhesion and rapid strength gain. Five Star® RS Anchor Gel meets the requirements of ASTM C 881 Types I and IV, Class B and C, Grade 3.

### ADVANTAGES

- VOC compliant
- Excellent adhesion to masonry, concrete, wood, steel and most structural materials
- Fast strength gain
- Gel consistency ideal for vertical and non-mating surfaces
- Convenient 1:1 mixing ratio
- Convenient cartridge and bulk packaging
- Low odor

### USES

- Heavy duty anchoring of rebar, threaded rods and epoxy-coated smooth dowels in all concrete, brick or stone masonry
- Best choice for structural bonding of heavy loads
- Grouting bolts, dowels, and pins where extremely rapid setting fast turn-around times are needed
- Performs in dry, damp, or wet holes

### 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

## Fast, High Early Strength Permanent Repair

### STRUCTURAL CONCRETE®

Five Star Structural Concrete® is a high early strength, single component, permanent concrete repair material. Containing migrating corrosion inhibitors, Five Star Structural Concrete® produces a repair which is dimensionally stable, develops an integral bond to existing concrete, and restores structural integrity within hours of placement. Application thickness can range from 1/4 to 12 inches (6 mm to 300 mm) in a single pour. Five Star Structural Concrete® provides increased corrosion protection of 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.

### ADVANTAGES

- Single component for reliability and ease of use
- High three-hour strengths
- Very low chloride ion permeability
- Fast turnaround times with high 3-hour strengths
- High bond strength
- Coarse aggregate extension
- Very low shrinkage
- Excellent freeze/thaw resistance
- One product for thin and thick placements
- Outstanding corrosion resistance for protection and rehabilitation

### USES

- Repair of concrete structures
- Rapid machinery foundation rebuilds
- Fast repairs for coatings
- Concrete floor repairs and overlays
- Construction joint repair
- Marine and hydraulic structure repairs
- Repair of tanks, sumps and curbs
- Available for Nuclear Safety Zone Applications<sup>1</sup>

<sup>1</sup>Compliant with NRC 10CFR50 Appendix B and ASME NQA-1 Quality Programs

For worldwide availability, additional product information and technical support, contact your local Five Star® distributor, local sales representative, or you may call the Five Star Products' Engineering and Technical Service Center at +1-203-336-7900.

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