

## Product Evaluation

### RE: Review of Tyfo SEH-51A Composite Fiber Reinforced Polymer Wrap System

#### **PRODUCT**

Tyfo SEH-51A is manufactured by FYFE company LLC located in San Diego, California and distributed by Fibrw Rap Installations Limited located in White Rock, British Columbia.

#### **VENDOR CLAIMS AND INFORMATION**

##### **CLAIMS**

Tyfo SEH-51A is a glass fabric combined with resins which in combination creates a composite system. The Tyfo Fiber Wrap systems have been tested and proven at over fifty universities and accredited private labs. This product has been approved by the Ministry of Transportation of British Columbia and several other DOT's. Website for this product: <http://www.fyfeco.com/>

##### **DESCRIPTION**

Tyfo SEH-51A Composite Fiber Reinforced Polymer Wrap System is comprised of Tyfo S Epoxy and Tyfo SHE-51A Reinforced Fabric. Tyfo SHE-51A is a custom weave, uni-directional glass fabric used in the Tyfo Fibrwrap System. The glass material is orientated in the 0° direction with additional yellow glass cross fibers at 90°. The Tyfo S Epoxy is a two-component epoxy matrix material.

##### **POTENTIAL USAGE**

Tyfo SEH-51A Composite Fiber Reinforced Polymer Wrap System can be used to add strength to bridges, buildings and other structures.

##### **STANDARDS**

Canadian Highway Bridge Design Code CAN/CSA S6-06.  
CSA S806-02

ISIS Design Manual "FRP Rehabilitation of Reinforced Concrete Structures"

American Concrete Institute ACI 440.2 – Guide for the Design and Construction of Externally Bonded FRP systems for Strengthening Concrete Structures.

#### **ALBERTA TRANSPORTATION COMMENTS**

##### **EXPERIENCE**

Alberta Transportation has used various FRP wrap systems on a trial basis.

##### **APPLICABLE STANDARDS**

Currently Alberta Transportation does not have guidelines or specifications pertaining to the use of Fiber Reinforced Polymer wrap systems.

##### **RECOMMENDATIONS**

Tyfo SHE-51A be listed as a Potential Product under Alberta Transportation Products List, Bridge Fiber Reinforced Polymer Wrap Systems – Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

##### **Notes:**

- System must be engineered for each project.
- System must be applied by a licensed applicator

**TRIAL PROJECTS**

Joe Filice

cc New Product Evaluation Standing Committee – Roger Skirrow  
Raymond Yu/Abdul Waheed\\Dave Besuyen