

CSS V-Wrap™ FPS

Fire Protection System



DESCRIPTION

CSS V-Wrap FPS Fire Protection System is a single component, spray-applied, specialized fireproofing material designed to be used with V-Wrap FRP systems to provide up to four hours of fire protection. It is a cementitious-based, non-combustible and non-flammable material.

CODE REPORTS AND COMPLIANCE



ESR-4930

ASSESSMENT

WHERE TO USE

CSS V-Wrap FPS is compatible with structural concrete and can be used to increase the fire rating of existing structural concrete members with low concrete cover.

ADVANTAGES

- UL listed product
- Provides up to 4-hour rating
- High bond strength
- Provides fast and efficient application

PRODUCT DATA

Generic Description

Single component fire protection system

Packaging

Size	Model No.
30 lb. (13.6 kg) bag	CV-FPS

Color

Dry mix: Gray

Mixed: Gray

Coverage

One bag yields approximately 10 ft.² (0.93 m²) at 0.75" (19.1 mm) thick. Contact STRUCTURAL TECHNOLOGIES for minimum required thickness. CSS V-Wrap FPS coverage must extend a minimum distance of 6" beyond all CSS V-Wrap FRP. Applicator should allow for waste and overspray.

Storage

Store units in a dry area above freezing temperatures, 32°F (0°C). Bags should be kept off the ground and protected from moisture. Plastic tarping is recommended.

Shelf Life

Stored at 70°F (21°C); 36 months.

TECHNICAL INFORMATION

Physical Properties

Density:

Fresh applied 55–60 lb./ft.³

Cured dry 26–29 lb./ft.³

Compressive Strength (ASTM E761): 22,716 lb./ft.²

Bond Strength (ASTM E736): 2,188 lb./ft.²

Flame Spread Index (ASTM E84): 0

Smoke Developed Index (ASTM E84): 0

Combustibility (ASTM E136): Noncombustible



PLANNING

WORKING TIME LIMITATIONS

CSS V-Wrap FPS has a working time of approximately 20 minutes at ambient temperatures between 60°F and 80°F (16°C to 27°C). If material begins to harden, it should be discarded.

Warning: Having dehumidifiers or strong air circulation in the area of application is not recommended as this can dry out the FPS and cause sudden cracking.

PREPARATION

SURFACE PREPARATION

Concrete surfaces should be clean, sound and exhibit an open pore structure. Remove any excess dust, debris, oils, or other bond-inhibiting materials prior to application.

MIXING

The mixing ratio is 1 part CSS V-Wrap FPS dry mix to 1.2 to 1.4 parts water by weight. Water amount should be 4.3–5 gallons (16–19 liters) per bag. Pour half of the water into a suitable mixing container. Add 1 bag (30 lb.) CSS V-Wrap FPS dry mix followed by the remaining amount of water. Using a mortar-type mix paddle, mix for 3 to 6 minutes until uniformly blended. Apply immediately.

EXECUTION

APPLICATION

Application: CSS V-Wrap FPS is applied by spray method. The FPS may be trowel-finished for a smoother appearance (avoid compacting the installed material when finishing). Apply CSS V-Wrap FPS onto a 10–20 mil coat of CSS V-Wrap thickened epoxy. The thickened epoxy is applied with a ¼" notched trowel and allowed to reach initial cure (1–4 hours) prior to application. Thickened epoxy should be soft to touch when application begins. The FPS may be built-up in one or more lifts to achieve the minimum specified thickness. Apply no more than ¾" thickness in one lift. If multiple lifts are required, subsequent lifts are applied 2–4 hours after the previous lift, or when the surface has achieved proper strength to support additional lifts. Application thickness should be measured continuously during spraying to ensure proper thickness.

SAFETY

Avoid breathing dust and airborne particles. Avoid contact with eyes and skin. Use of an approved respirator is required. Safety glasses or a face shield are required to prevent eye contact. Rubber gloves, rubber boots and protective suits are recommended for handling and application of this material. Wet fireproofing material is very slippery, use caution and anti-slip surfaces.

FIRST AID

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of clear water; contact physician if necessary. If inhaled, remove individual to area with fresh air.

CLEAN UP

Tools and Equipment: Clean all tools and equipment with water immediately after use. Dry material may be swept or vacuumed up. Dispose of in accordance with local, state and federal regulations.

Disposal: Dispose of container and unused contents in accordance with federal, state and local requirements.

LIMITED WARRANTY

This product is covered by the Simpson Strong-Tie RPS Product One-Year Limited Warranty, which is available at strongtie.com/limited-warranties or by calling Simpson Strong-Tie at (800) 999-5099.

IMPORTANT INFORMATION

It is the responsibility of each purchaser and user of each product to determine the suitability of the product for its intended use. Prior to using any product, consult a qualified design professional for advice regarding the suitability and use of the product, including whether the capacity of any structural building element may be impacted by a repair. As jobsite conditions vary greatly, a small-scale test patch is required to verify product suitability prior to full-scale application. The installer must read, understand and follow all written instructions and warnings contained on the Limited Warranty, product label(s), Product Data Sheet(s), Safety Data Sheet(s) and the strongtie.com website prior to use. For industrial use only by qualified applicators. KEEP OUT OF REACH OF CHILDREN!

 **WARNING!** Cancer and reproductive harm — www.P65Warnings.ca.gov.