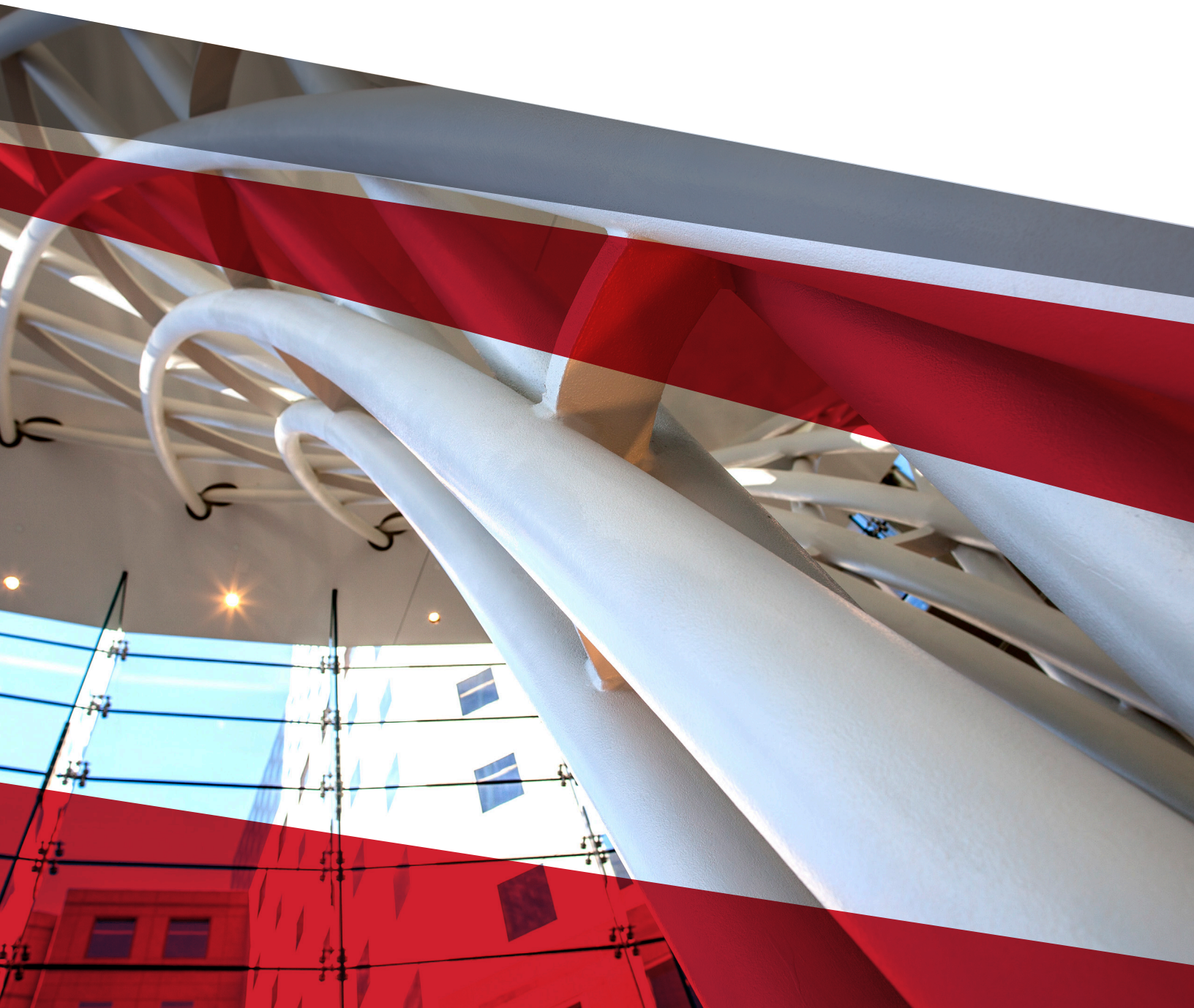
carboline®
Coatings - Linings - Fireproofing

Decorative fire resistive coatings

Intumescent solutions for all project scenarios



Engineering services for maximum project impact

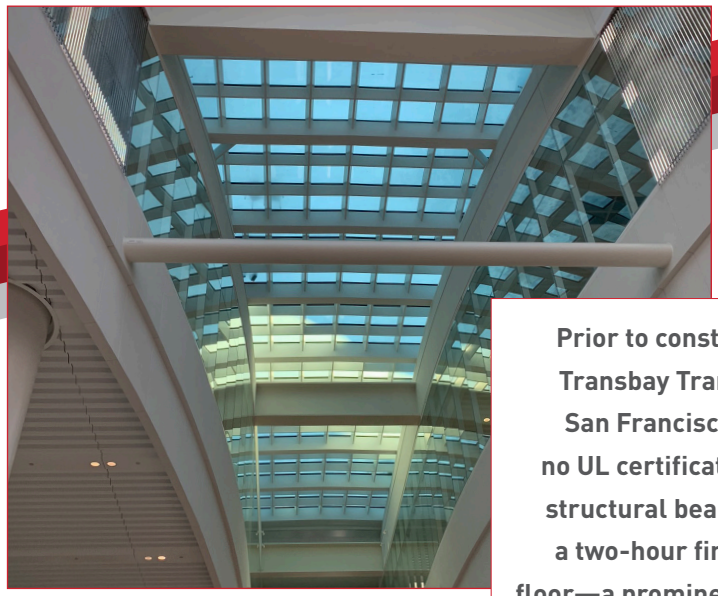
On-time, on-budget project delivery is the aim of every builder. Carboline combines fire science with the art of construction to develop high-performance fireproofing products that break down the barriers in their way. When builders work with Carboline, that means:

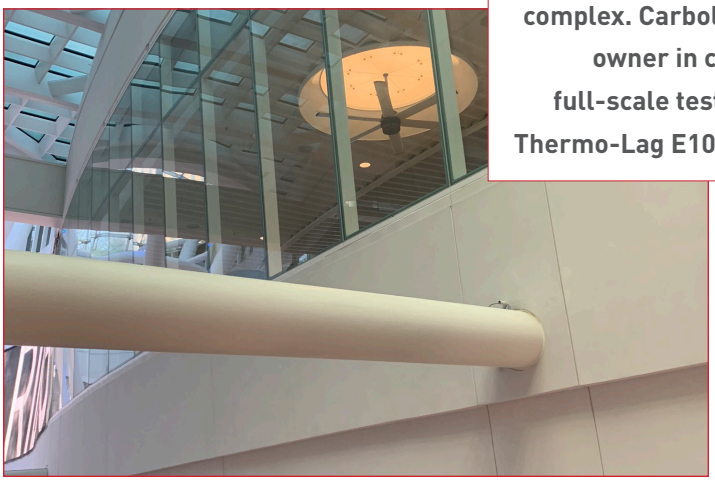
Collaborating with a dedicated technical team that understands construction as well as they do fireproofing

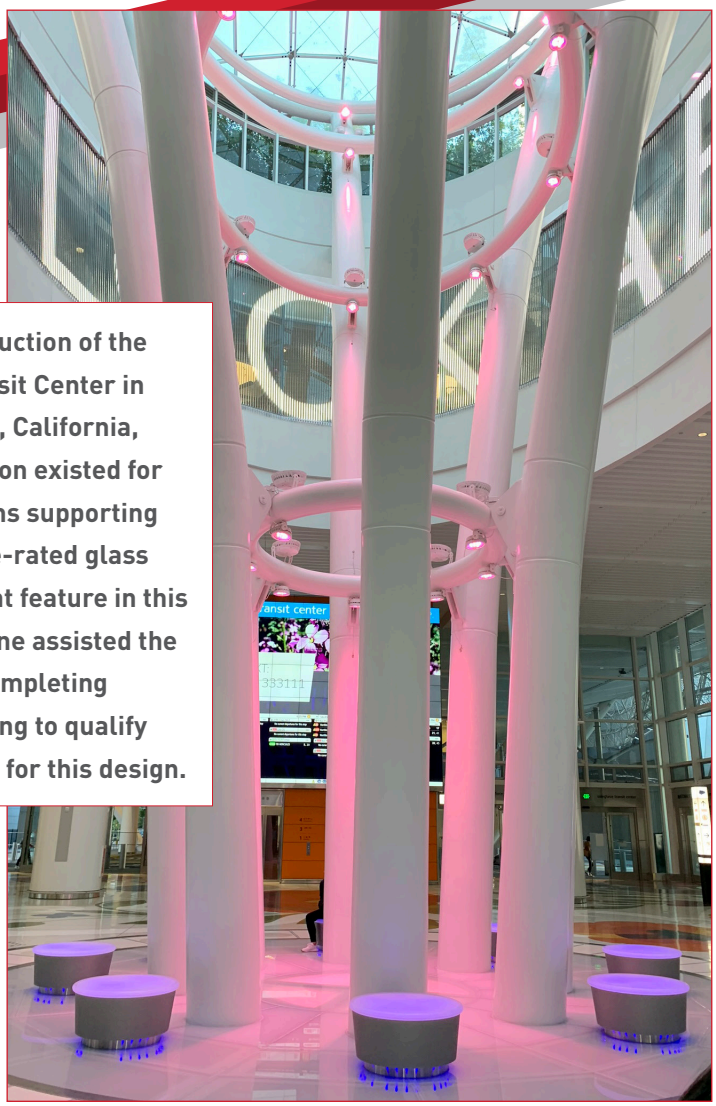
Leveraging preconstruction product selection support to optimize schedule and lower cost

Benefiting from on-site installation support for improved quality and expedited problem resolution

When you work with Carboline, it's almost like working with a construction company that manufactures fireproofing.







Prior to construction of the Transbay Transit Center in San Francisco, California, no UL certification existed for structural beams supporting a two-hour fire-rated glass floor—a prominent feature in this complex. Carboline assisted the owner in completing full-scale testing to qualify Thermo-Lag E100 for this design.

Ratings, standards, and listings

For over 40 years, Carboline has manufactured decorative intumescent coatings that are fully rated for commercial and some industrial service throughout North America and around the world. Some or all of these products are:

- Rated for up to four hours of fire resistance
- Listed with Underwriters Laboratories (UL) and Intertek
- Compliant with ANSI/UL 263, ASTM E119, and CAN/ULC-S101 standards as required by the International Building Code, the California Building Code, and the National Building Code of Canada

Full-scale testing in-house

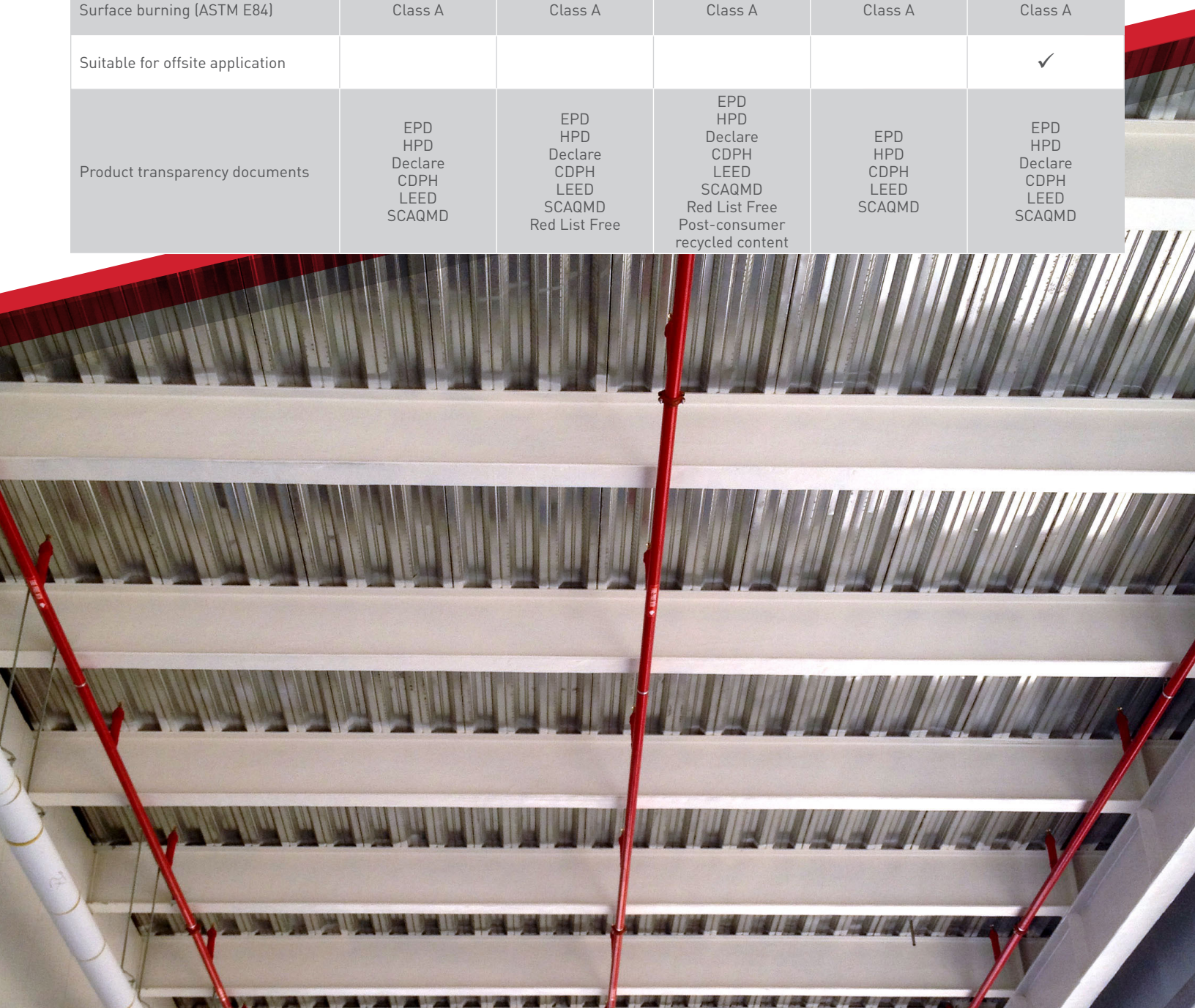
In 2020, Carboline began in-house testing of its passive fire protection materials in the new Fire-Science Research Center in St. Louis, Missouri.

Investing in this state-of-the-art facility reflects the company's commitment to developing quality high-performance materials and significantly reduces the time it takes to put innovative products in the hands of builders worldwide.

High performance and high appeal

Firefilm®, Thermo-Sorb®, and Thermo-Lag® series intumescent materials allow architects to create unique exposed steel designs that combine visual appeal, durability, and performance anywhere fire resistance ratings are required.

	Firefilm III	Firefilm IV	Thermo-Sorb VOC	Thermo-Sorb HB	Thermo-Lag E100
Type	Water-based	Water-based	Solvent-based	Hybrid technology	Epoxy-based
Environment	Interior	Interior	Interior	Interior/exterior	Interior/exterior
Finish	Ultra smooth	Smooth to slight texture	Smooth to slight texture	Smooth to slight texture	Smooth to slight texture
VOC	20 g/l	4 g/l	142 g/l	143 g/l	13 g/l
Surface burning (ASTM E84)	Class A	Class A	Class A	Class A	Class A
Suitable for offsite application					✓
Product transparency documents	EPD HPD Declare CDPH LEED SCAQMD	EPD HPD Declare CDPH LEED SCAQMD Red List Free	EPD HPD Declare CDPH LEED SCAQMD Red List Free Post-consumer recycled content	EPD HPD CDPH LEED SCAQMD	EPD HPD Declare CDPH LEED SCAQMD

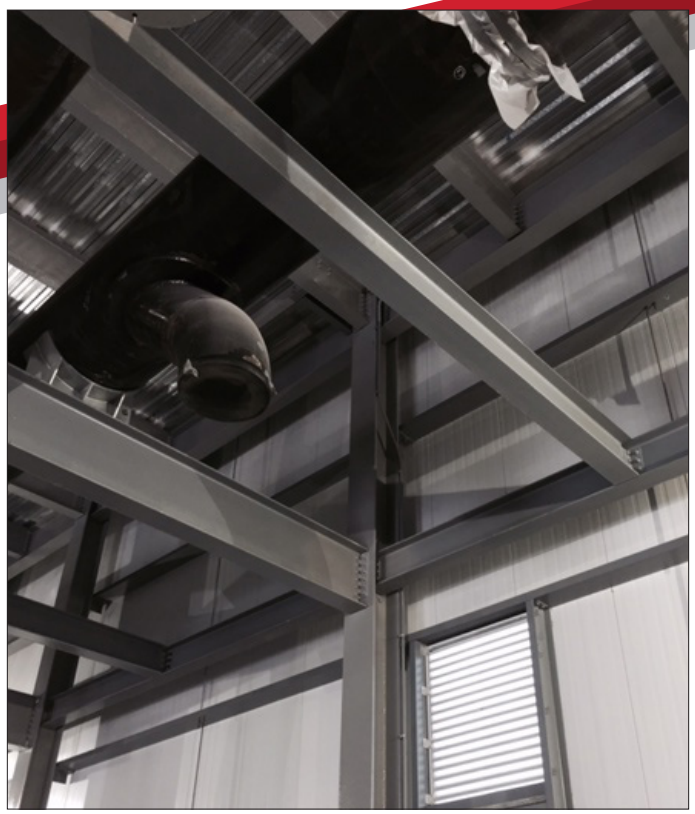


The showstopping appeal of Firefilm

Water-based Firefilm thin-film coatings offer up to three-hour protection of steelwork while providing the industry's premier aesthetic finish. Firefilm products have achieved an exceptional track record for combining performance and appeal in high-profile interior spaces including commercial buildings, data centers, and microelectronics and pharmaceutical manufacturing facilities.

Firefilm IV cures to a very smooth, decorative finish so no topcoat is required. It features fast cure times for improved production of up to two coats per day. Firefilm IV is LEED-compliant and features extremely low VOCs at 4 g/l.

Firefilm III cures to form a smooth to slight orange peel finish that is durable and resistant to impact and abrasion. It is widely compatible with topcoat options, is LEED-compliant, and features very low VOCs at 20 g/l.



Firefilm III C features similar curing, finish, and performance characteristics as Firefilm III but was uniquely formulated for controlled sterile or cleanroom spaces in which outgassing from coatings is essential. Firefilm III C features very low VOCs at 20 g/l.

Case History: Thoughtful fire protection beside the "Gate of Heaven"

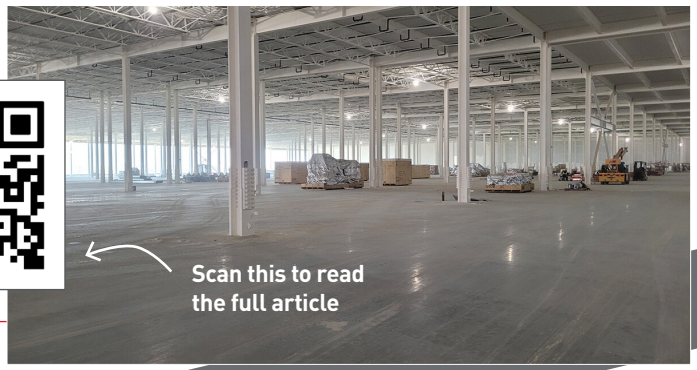
Thermo-Sorb for superior field performance

Thermo-Sorb series solvent-based intumescent coatings for interior service feature low-temperature and fast-cure field application capabilities that optimize open-frame construction. Thermo-Sorb products are commonly specified in commercial buildings, data centers, sensitive microelectronic or pharmaceutical production facilities, and some light and moderate industrial uses such as electric vehicle manufacturing.

Thermo-Sorb VOC is a solvent-based, low-VOC (142 g/l) intumescent coating offering up to three hours of fire protection that can be applied in semi-exposed environments. Fast-cure properties allow for application of two coats per day, and the coating film becomes water-resistant in as little as 30 minutes following application in high-humidity locations. Thermo-Sorb VOC additionally features strong chemical resistance and is suitable in EV battery, EV assembly, and computer chip manufacturing facilities.

Thermo-Sorb HB is a solvent-based, high-build, single-coat system for interior or exterior use featuring good weather resistance that allows for application to open frame construction. Fast moisture-cure properties support application at temperatures below 32°F (0°C), and very high solids content improves theoretical coverage rate.

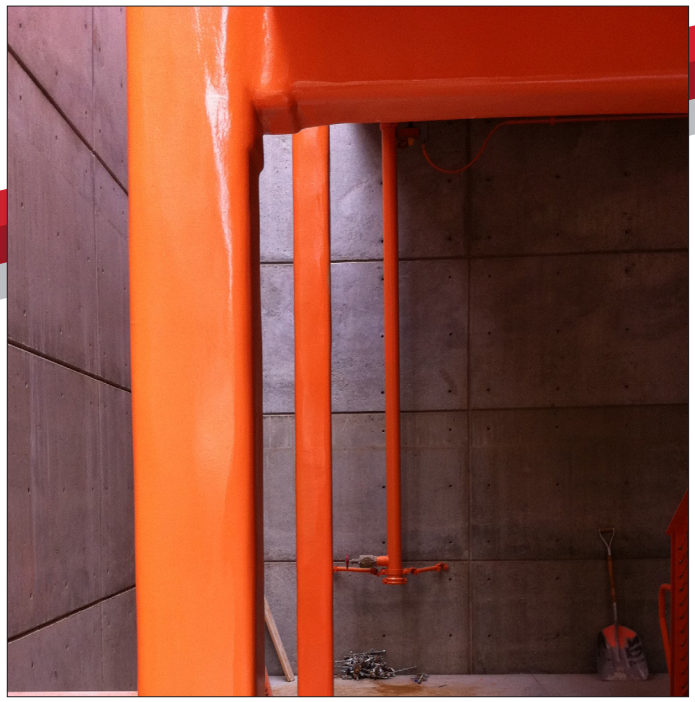
Case History:
Building this EV facility for a major manufacturer is a model of flexibility



Versatile Thermo-Lag for shop and field

Thermo-Lag E100 series epoxy intumescent coatings give construction teams freedom to choose shop or field application according to individual project circumstances. This product series is suitable for interior or exterior service in commercial and light industrial spaces. High-solids, low-VOC variants are available in both plural- and single-component formats.

Thermo-Lag E100 is a 100% solids, plural-component epoxy intumescent offering three hours of fire protection to structural steel. The coating cures very rapidly, with dry-to-touch and recoat times as little as 30 minutes for rapid shop throughput. Extremely low VOCs at 13 g/l.



Thermo-Lag E100 S is a 95% solids epoxy intumescent coating with similar performance to Thermo-Lag E100 but formulated for single-component application. Single-component application involves less complex equipment requirements and is preferred for field installation. Very low VOCs at 64 g/l.

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Essential product transparency

The environmental, health, and safety impact of construction materials matters for builders, owners, and users alike. Carboline's intumescent fireproofing products and supply chains have been extensively assessed to compile essential transparency documents such as EPDs, HPDs, Declare labels, LEED VOC data, and more.

Similar documentation is available for many of the primers and finish coats compatible with Carboline's intumescent coating portfolio.

To access all transparency information, scan the QR code. Then, select a product type or enter a name in the search bar.

GLOBAL COATINGS LEADERS™

RIGHT PEOPLE · RIGHT PRODUCTS · RIGHT LOCATIONS

Exceptional products.
Superior technical guidance.

Advancing a more durable, resilient, and sustainable built environment since 1947.

1947

Since 1947, we have been dedicated to delivering innovative coatings, linings, and fireproofing products. We are driven to provide the best solutions, service, and quality to our customers.

Our customers can be confident that behind every sale is a team of some of the most well-respected members of the industry, dedicated and determined to make your project a success.

Our global network of industrial service centers and distribution points are strategically located around the world to provide the highest level of service and support for your project.

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