

# CONSTRUCTION AND CIVIL ENGINEERING

EPOXY SYSTEMS FOR CONSTRUCTION AND CIVIL ENGINEERING

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It's all in the Chemistry

[www.sicomini.com](http://www.sicomini.com)

Composite materials provide a broad spectrum of performance advantages compared to traditional building materials such as steel and concrete including: high tensile strength, stiffness, improved fatigue performance and corrosion resistance.

Sicomin offers a complete package of epoxy resins, adhesives and coatings for the Construction and Civil Engineering market and has supplied materials for many of the world's most iconic architectural composite structures.

Specialising in the development of fire retardant epoxy materials, Sicomin have developed a market leading range of FR solutions including resins and coatings tested to EN 13501 (EUROCLASS B-S1-d0) and ASTM E84 (Class A).





## SR FIREGREEN 37



A more sustainable fire retardant hand laminating system.

- Intumescent epoxy resin system with 25% bio-based carbon content.
- Halogen free with low smoke opacity and toxicity.
- Range of hardeners to adjust cure times.



**VIEW  
SR FIREGREEN 37  
DATASHEET**

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Available in  
industrial  
volumes.



## SGI 128



**VIEW  
SGI 128  
DATASHEET**

A bio friendly intumescent gelcoat.

- Up to 38% bio-based carbon content.
- Exceptional fire performance.
- Halogen free with low smoke toxicity.
- Hardwearing weatherproofed finish for exterior applications.
- Available in industrial volumes.
- Tested to EN 13501 (EUROCLASS B-S1-d0) and ASTM E84 (Class A).

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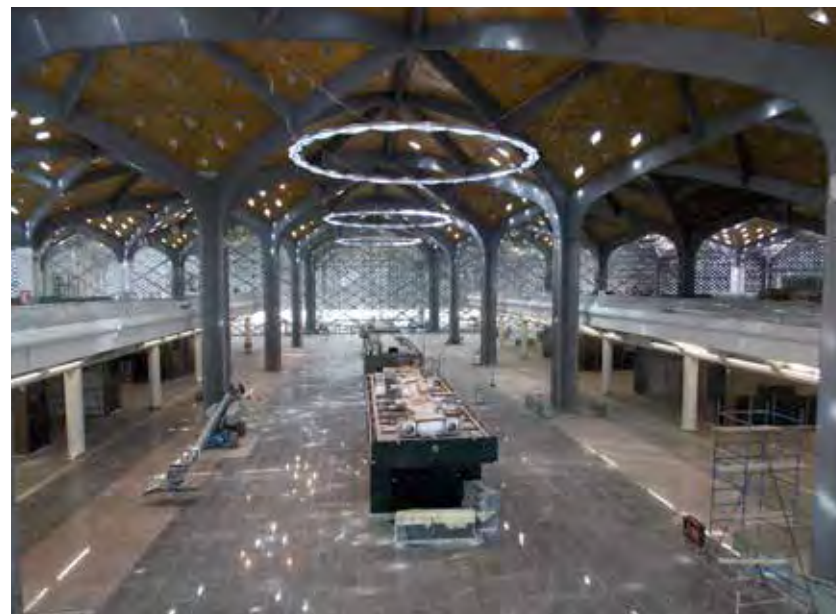
## SR 1124

A fire retardant epoxy resin.

- Formulated for hand laminating, infusion and filament winding processes.
- Low density fire retardant system, intumescent and halogen free.
- Low smoke opacity and toxicity.
- Meets the key construction industry fire standards.



VIEW  
SR 1124  
DATASHEET



## Complete package of composite materials for Construction and Civil Engineering



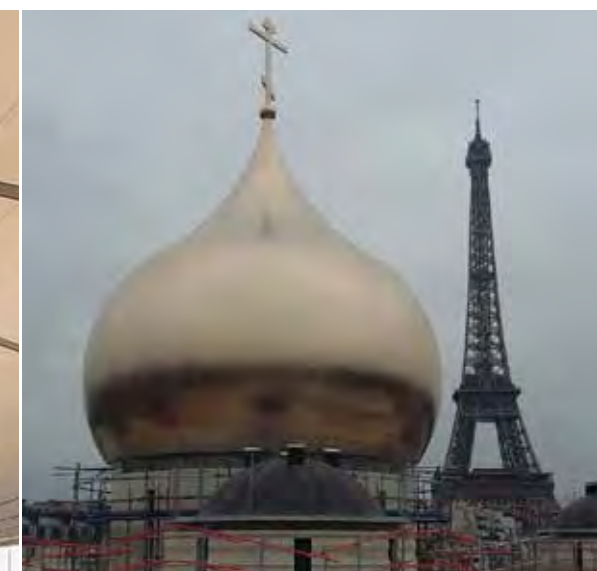
VIEW  
ISOBOND SR 7200 HTG - SD 710X  
DATASHEET

## ISOBOND SR 7200 HTG - SD 710X

A high Tg structural epoxy adhesive.

- High performance adhesive with Tg max of 80°C.
- Specifically formulated for thick and thin bond lines.
- High fatigue strength and resistance to microcracking.
- Adheres to most materials.
- Gel texture for easy mixing and application.

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## SR 1121

A fire retardant epoxy hand laminating system.

- Low viscosity, good wet-out properties.
- Halogen free fire retardant system.
- Low smoke opacity and toxicity.

**CASE STUDY**



**ICONIC LANDMARK CREATED WITH SICOMIN'S HIGH PERFORMANCE EPOXIES**

The Celtic Cross is a majestic structure that stands 20 metres high beside the River Tamar in Saltash on the Cornish border. This striking masterpiece was the brainchild of the highly regarded artist, Simon Thomas, who aspired to create an iconic work that celebrates Cornwall's cultural history and projects the region's image as a vibrant part of the modern world.

With the help and expert advice of Matrix Composites, Sicomin's local base air distributor, a selection of Sicomin's technical, superior and high strength epoxy systems were specified for the structure's production.

Simon Thomas first conceived the idea of the Celtic Cross in 1980. However, it wasn't until 2011 that it became a reality when the project received financial support from the National Lottery Fund and Salish Town Council.

Constructing the Cross was very much a collaborative process involving specialist teams of composite technicians, engineers and skilled fabricators. Optima Projects undertook the structural analysis. Independent Composites Ltd, produced the three carbon spacer 'beams' that form the structure's frame.

From the structure's immense framework, and Gateguard, a major steel manufacturer, assembled all the components. The final build process was managed by Top McGovern, an experienced bondbuilder and composite technician.

For such a large scale construction, structural integrity was obviously paramount and Sicomin's advanced epoxy resin was able to offer superior strength and durability in its unique dimensions. Durable and robust, the structure has needed to be considered as the Cross is positioned on the west coast of the UK which often endures extreme weather conditions.

In terms of material selection, Sicomin's SR 1121 product was used to produce the carbon spacers that run from the base to the structure's head.

**READ CASE STUDY**

 **VIEW SR 1121 DATASHEET**



Tested to  
EN 13501 (EUROCLASS B-S1-d0)  
and ASTM E84 (Class A).

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## ISOBOND SR 7100

 **VIEW ISOBOND SR 7100 DATASHEET**

A structural epoxy adhesive for thin bond lines.

- Specially formulated for thin bond lines, resists high stress in fatigue.
- Excellent resistance to propagation of microcracks.







