Promat

Structural
fire protection

CAFCO® 300

Steelwork Sprayed Coating Fire Protection
Building & Construction Solutions

Technical manual

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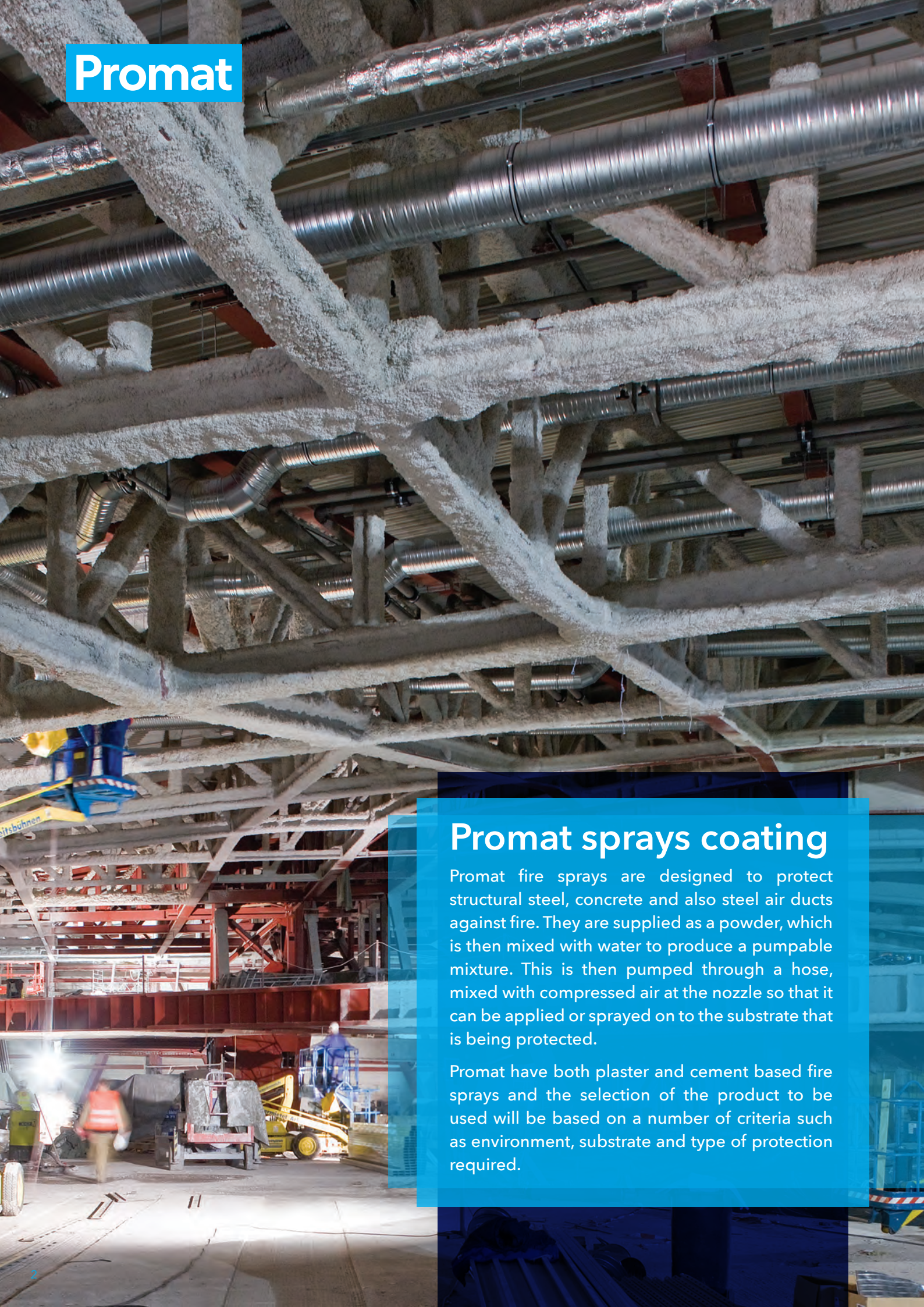

Promat sprays coating

Promat fire sprays are designed to protect structural steel, concrete and also steel air ducts against fire. They are supplied as a powder, which is then mixed with water to produce a pumpable mixture. This is then pumped through a hose, mixed with compressed air at the nozzle so that it can be applied or sprayed on to the substrate that is being protected.

Promat have both plaster and cement based fire sprays and the selection of the product to be used will be based on a number of criteria such as environment, substrate and type of protection required.

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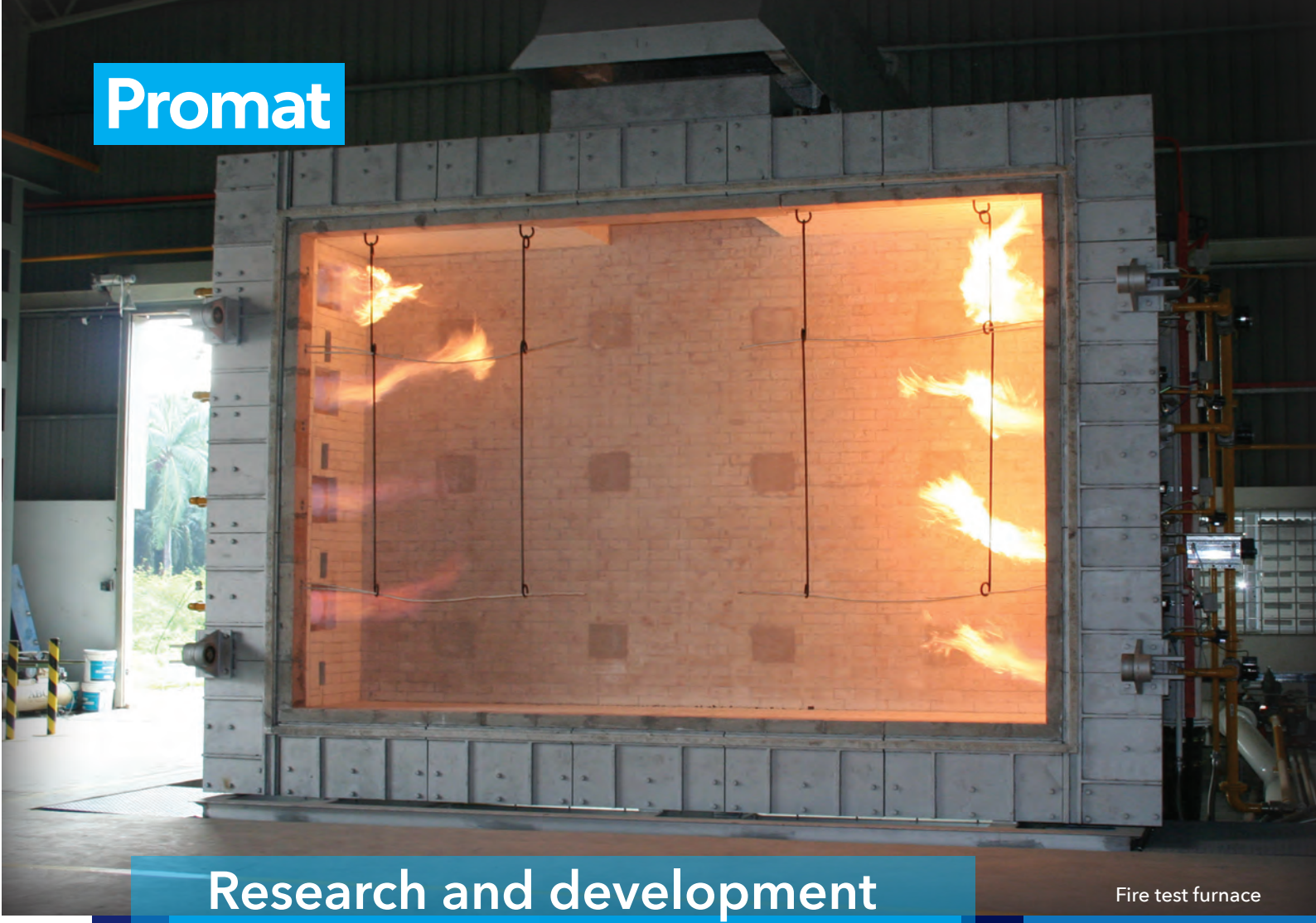

Fire test furnace

Research and development drives growth of sophisticated fire protection technologies

Fire protection nowadays is divided into two broad categories. These are described as "active" and "passive" systems.

Active fire protection measures are those that use an integrated system consisting of sprinklers and alarms that require electricity and water to realise their full potential in fire situations.

On the other hand, passive fire protection systems do not require power or water to operate in the event of a fire. They are designed and built into the structure to protect on demand, as and when necessary.

It is the research and development of passive fire protection that Promat has devoted many years and considerable resources. Today, Promat is long recognised worldwide as a leading provider of passive fire protection systems, a reputation reinforced by more than six decades of cutting edge research and development.

Promat runs continual investigation programmes at the Promat Research & Technology Centre (PRTC) facilities in Belgium. The PRTC testing laboratories are accredited to EN45001. The PRTC furnaces are state-of-the-art and offer multiple possibilities for the testing of construction systems under development. Promat also has R&D facilities in Australia and Malaysia which are used extensively to ensure all Promat systems are suited to the Asia Pacific markets.

All Promat materials are manufactured in accordance with accredited EN ISO9001: 2000 and ISO14001 quality and environmental management systems. Comprehensive testing of all Promat products and systems has been carried out by independent and nationally approved laboratories around the world in order to meet the relevant sections of BS476, AS1530, EN and ISO etc, as well as many other international test standards.

The accumulated knowledge and technical expertise is available to all clients and customers who specify Promat passive fire protection. Full technical and sales support teams are available to provide information and assistance to help in the design and installation of all Promat fire protection solutions.

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CAFCO® 300

Vermiculite and gypsum based wet mix spray

Product description

CAFCO® 300 is a spray or trowel applied, single package factory controlled premix, based on vermiculite and gypsum.

Steel structures protected with CAFCO® 300 have undergone fire resistance tests up to 240 minutes in approved independent laboratories to recognised standards throughout the world, including:

- Australia (AS 4100)
- Belgium (NBN S 21-202: 1980)
- France (August 1999 Ministry Decree)
- Germany (DIN 4102: 1977-2009 and DIN EN 1363-1: 1999-2010)
- Harmonised European Standard ENV 13381: Part 4: 2002
- UK (BS 476: Part 6: 1989, Part 7: 1997 and Part 21: 1987)
- USA (ASTM E119: 1998)

Material properties	
Color and finish	Off -white, monolithic, spray texture
Alkalinity	8.0–8.5pH
Cure	By hyraulic set
Initial set	2 to 6 hours without acceletrator at 20°C (68°F) and 50% RH
Theoretical coverage	217m²/tonne at 15mm thick
Packaging	20kg bag
Storage	Protected from frost, excessive heat (above 45°C) and strong radiant sunlight
Shelf life	months12

Physical Performance		
Density	ASTM E605	310kg/m³ ±15% without accelerator, 310kg/m³ -10% (approx.) with accelerator
Compressive strength	ASTM E761	1.22kg/cm²
Deflection	ASTM E759	No cracking, delamination or spalling
Impact resistance	ASTM E760	No cracking or delamination
Corrosion resistance	ASTM E937	Does not promote corrosion of steel and does not require application over primed steel
Air erosion resistance	ASTM E859	No erosion

Reaction to Fire & Thermal Properties					
Combustibility		**Surface burning**		**Thermal conductivity**	
Non-combustible:	BS 476 ASTM E136	Class 0 (flame spread & smoke developed:	ASTM E84	ASTM C518:	0.078W/mK

All physical and mechanical values are averages based on standard production and tested according to internal procedures. The typical values are given for guidance. The figures can change dependent on the test methods used. If a particular value is of prime importance for a specification, please consult Promat Technical Department. CAFCO® 300 is manufactured under a quality management system certified in accordance with ISO 9001: 2015.

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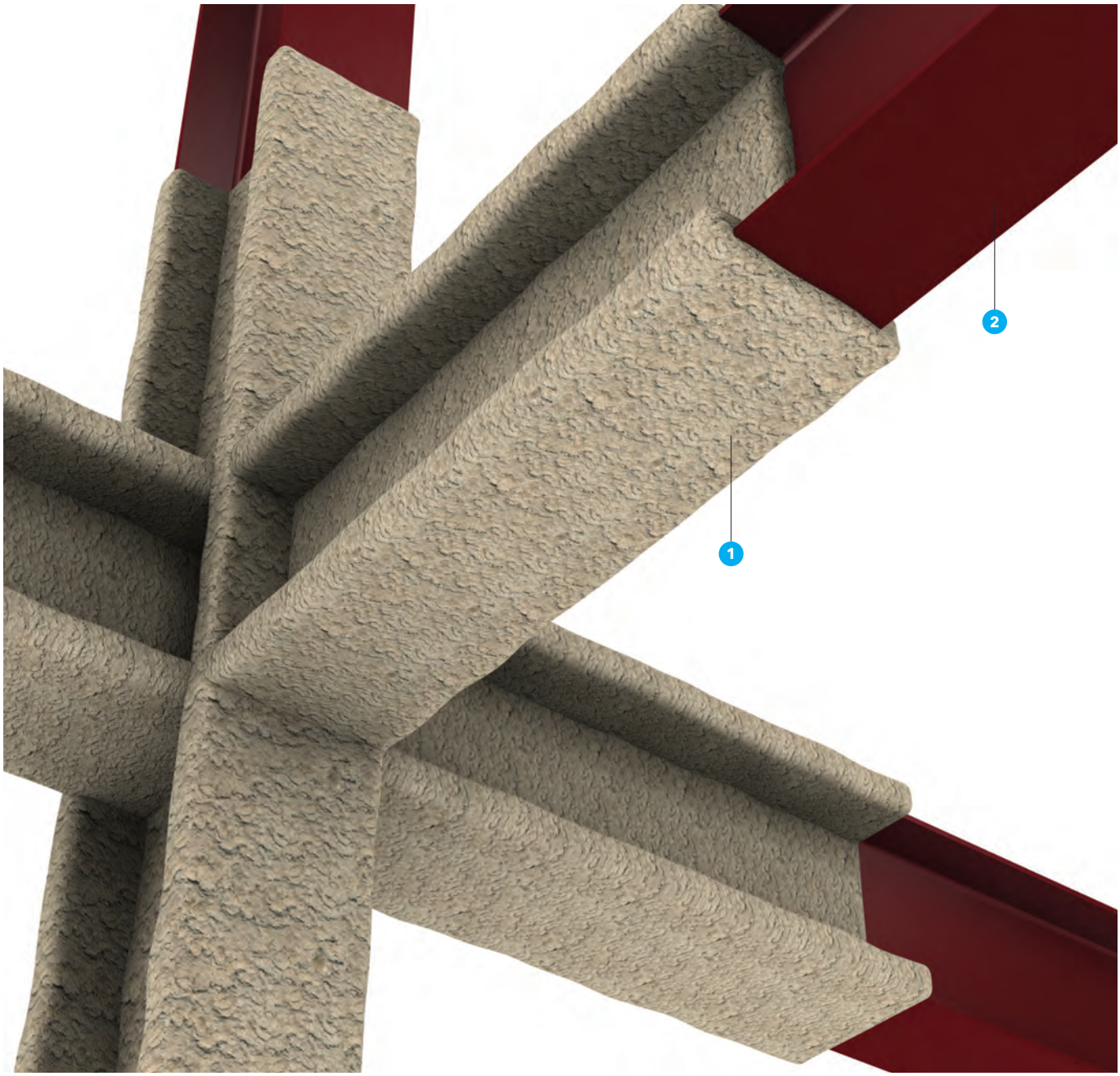
CAFCO® 300 240 minutes fire protection sprayed coating for steel column & beam

Up to 240/-/- fire resistance in accordance with the requirements of AS 4100



1. Sprayed or hand trowelled CAFCO® 300 vermiculite and gypsum based wet mix material, thickness in accordance with required FRL & Scetion Factor. Contact Promat for details
2. Primed structural steel surfaces with compatible primer approved by Promat; substrate to be clean, dry and free from dust, loose mill scale, loose rust, oil and any other conditions that may prevent from good adhesion

For thickness calculations on hollow sections, cellular beams, castellated sections, composite floors, upgrading of concrete slabs and more complex structural situations, please consult Promat.

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- The technical data provided in this publication is based on mean values prevalent at time of publication and is thus subject to fluctuation. It should not be regarded as a guarantee to system performance.
- All data contained herein conforms to and frequently surpasses generally accepted fire protection standards recognised by most professional fire science practitioners and regulatory authorities worldwide. The same general principle is equally applicable to all Promat products and systems. Promat has access to a considerable body of test authentication data and this can be provided on a complimentary basis upon request. It should be noted however that this publication replaces all previous editions in its entirety.
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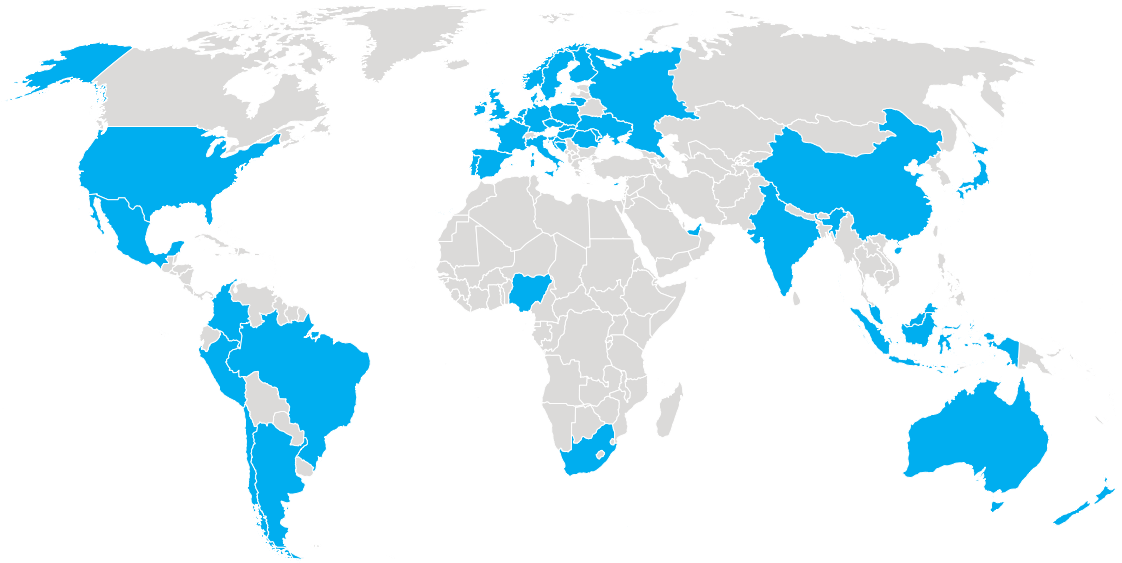

Etex is an international building materials specialist; the company wants to inspire people around the world to build living spaces that are ever more safe, sustainable, smart and beautiful. Founded since 1905 and headquartered in Brussels, Belgium, Etex currently operates in 101 production sites across 42 countries, employs more than 13,000 people and is one of the largest fibre cement producers in the world.

Through its subsidiaries, the group offers an extensive range of products: Plasterboard and passive fire protection systems, fibre cement solutions for cladding, façade and roofing as well as innovative modular systems.

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