

Case Study:
Helping protect a major
new Italian tunnel
development

The challenge

The Serralunga tunnel runs for 1300m near the mountain town of Rocca di Cambio, in Italy, connecting the popular ski resorts of Campo Felice with the Plateau Rocche via the motorway system. Built at an altitude of 1600m, the Serralunga tunnel has a gradient of 4.5% and was opened to traffic in December 2013.

The Serralunga Tunnel has two escape routes, which take the form of suspended paths. The challenge that faced the design team working on this project was lining those escape paths with a material that could withstand extremely high temperatures, protecting both the tunnel's structure and the people within from the ravages of fire and the effects of smoke.

A typical tunnel car fire reaches 400°C, however a large petrol tanker fire may reach up to 1,400°C, meaning all tunnels must offer protection sufficient to deal with such an eventuality

The solution

Through specialist installer Kapyfract AG, FireMaster® FireBarrier 135 from Morgan Advanced Materials was selected for the Serralunga project. One of the most extensively fire-tested products available for this purpose, it can be applied either in the form of pre-cast sheets, or by spraying to a substrate attached to the tunnel.

In the Serralunga tunnel, the product was applied over a galvanised wire mesh, allowing it to reach every part of the tunnel surface, at a thickness of just 36mm. FireBarrier 135 has very high adhesion capacity, so very little of the material is lost during application. FireBarrier 135 also dries quickly, a particular advantage in the Serralunga project, as the tunnel needed to open on time.

The result

The installation of FireBarrier 135 in this project was swift and straightforward and has given a smooth and uniform finish to the tunnel escape routes.

The treatment of the suspended escape galleries in this tunnel with FireBarrier 135 provides an extremely significant layer of protection for users of this tunnel.

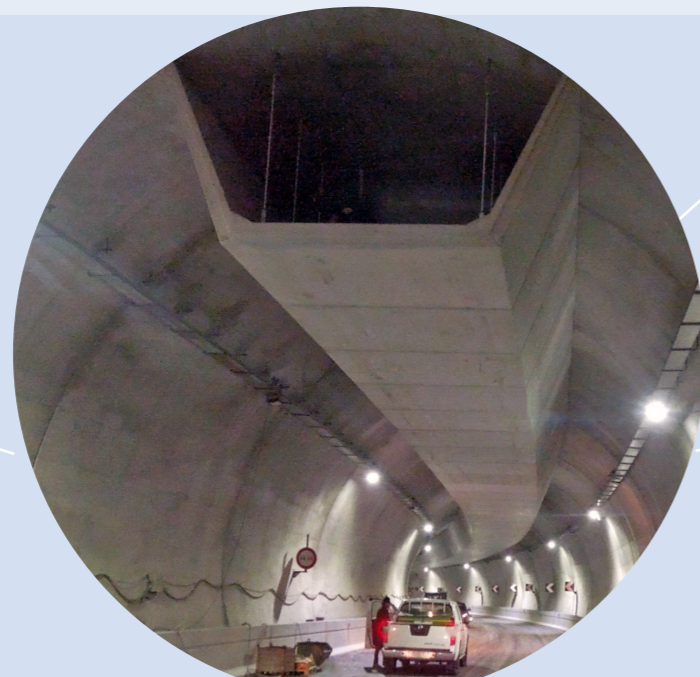
Its use is backed by a wealth of evidence, and installation of approximately 6,500 square feet (600m²) of protection was achieved in under 40 days.

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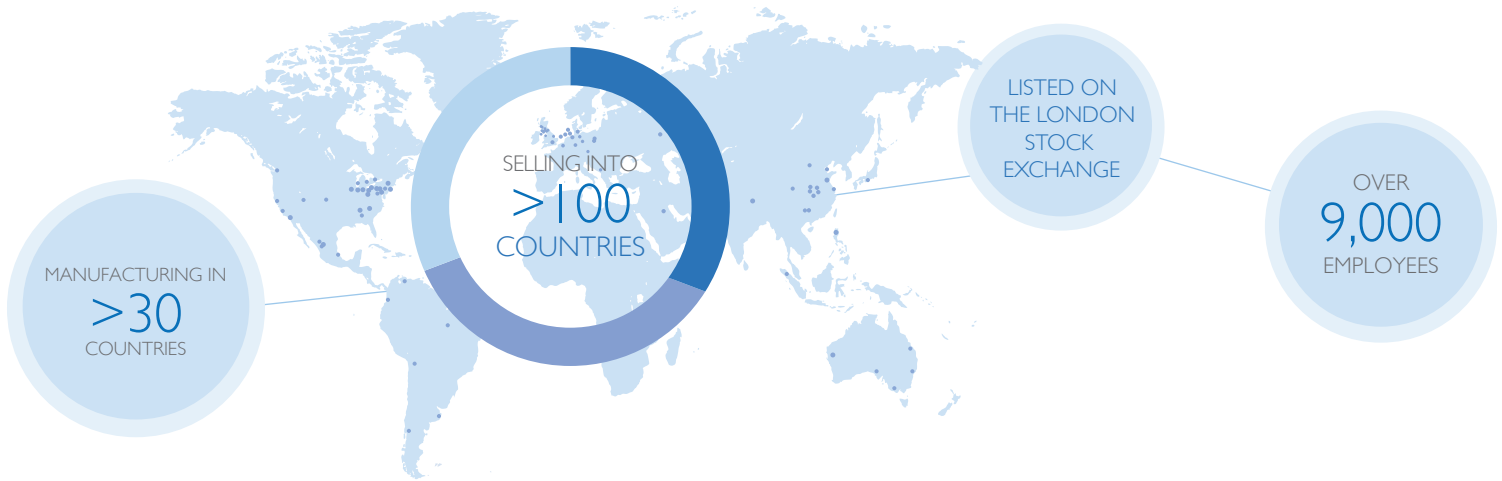
Petrol tanker fires
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The **1.3km**
Serralunga tunnel was
officially opened to traffic
in December 2013



ABOUT MORGAN ADVANCED MATERIALS



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