



SIKA AT WORK

THE CHOINDEZ TUNNEL, SWITZERLAND

SIKA SOLUTIONS FOR TUNNEL CONSTRUCTION

BUILDING TRUST



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PROJECT DESCRIPTION

The Choindez Tunnel is part of the A16 motorway expansion through the Canton of Jura, between Delémont and Moutier in North West Switzerland, and near to the French border. The main road tunnel has two lanes, with a second safety tunnel running parallel to it and the total length of the tunnels is 2,790 m in length. The tunnels were built using different techniques according to the ground conditions in each section, including drill and blast, road header machines and tunnel boring machines. The cut and cover method was also used for a 420 m long section at the north end portal, in total approximately 38,000 m³ of sprayed concrete was required for the tunnel lining and rock surface stabilization after the excavation, plus 125,000 m³ of insitu poured concrete was to be used in this project.

THE PROJECT REQUIREMENTS

To ensure safe and rapid tunnel driving and stabilization, it was important for the sprayed concrete to have consistent high early strength, with easy adaptation to be very fast setting when required. Good workability and ease of pumping were also important factors for both the sprayed concrete and the insitu poured concrete, which all had to be able to be adapted to suit the different ground and ambient conditions at different time of the year.



THE SIKA SOLUTIONS

For these complex and varied requirements Sika carried out preliminary tests with the available raw materials in the laboratory and then on site to determine the optimum solutions. These mixes were adjustable and the personnel on site could be trained to adapt them to the ground and ambient conditions. Sika was able to supply all of the admixtures required to achieve the placing and performance requirements of all of the concrete for the tunnel.

For the sprayed concrete

- Sika® ViscoCrete® Superplastiziser
- SikaTard® Retarder
- Sigunit® AF Accelerator

For the insitu poured concrete

- Sika® ViscoCrete® Superplastiziser
- Sika® Fro Air Air entrainer
- Sika® Antigelo Antifreeze & Hardening Accelerator



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PROJECT PARTICIPANTS

Owner: Swiss National Road Network / The Canton of Jura

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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