

Barrails' Viaduct - Highway A89 (1998-1999)

- **Project** : Realization of 1100 prefabricated voussoirs (weighing 50 tons each) for the building of a 1460 meter long viaduct, enabling the hydraulic release of the Dordogne river, as well as the crossing of the Paris-Bordeaux railway and the motorway 2089.



■ **Realization** :

- Owner : ASF
- Project Manager : Scetauroute
- Company : Campenon Bernard / Quillery

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■ Specifications :

- Development of a B40 concrete (with CPJ CEMII 52.5 PM manufactured by Lafarge La Couronne)
- Maintain a rheology level of at least one hour and a half with a slump of 13 ± 2 .
- High strength at young ages (20 MPa after 16 hours, 4 voussoirs cast per day).
- Perfect quality of facing

Concrete volume : 34 000m³

■ Admixtures :

- 80 tons of **CHRYSO[®]Fluid Optima 100** (Superplasticiser - High Range Water Reducer), with a proportion of 1 %
- 80 tons of **CHRYSO[®]Xel 650** (Set Accelerator) with a proportion of 1 %

■ Results :

- 27 MPa after 20 hours
- 63 MPa after 28 jours

