

News Release



MasterEase optimizes concrete during construction of the "Tunnel de Champel" in Geneva

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- Superb rheological properties of concrete and easy pumpability simplify processing
- MasterEase allows changes in cement sources and reduces costs and CO₂ emissions

Geneva/Switzerland, November 8, 2017 – During the construction of the "Tunnel de Champel" in Geneva, MasterEase from Master Builders Solutions® proved to be the perfect superplasticizer for sprayed concrete. MasterEase reduces the viscosity of the concrete, making it less sticky and therefore easier to pump and apply. This is

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a significant advantage for sprayed concrete applications. MasterEase UG 3904 increases the workability time and, when applied, the concrete hardens more evenly on the tunnel wall.

Thanks to the use of MasterEase, the Swiss tunneling contractor Marti Tunnelbau AG was able to switch to a more economical cement for the construction of the "Tunnel de Champel". Initially, the change in cement presented some challenges: "The combination of the new cement and the old superplasticizer created problems due to the reduced open time," said Nicole Kölbener, construction manager at Marti Tunnelbau. "After only one hour, the flowability was no longer sufficient."

René Bolliger, Head of Underground Construction at BASF for Germany, Austria, and Switzerland, recommended to the tunneling specialist and the cement supplier Holcim that the MasterEase UG 3904 superplasticizer should be added.

Kölbener is pleased with the outcome: "Thanks to MasterEase UG 3904, we have found a product that works extremely well with the concrete used and has enabled us to change the cement source, thereby increasing our profitability by five percent."

Fabien Cerf, Head of Sales Geneva at Holcim Switzerland, stresses the environmental benefit: "We now have the optimal situation where the cement comes from a cement plant that is only a few kilometers away." This eliminates the need for the 350-kilometer journey to the old cement plant. "By changing the cement, we have been able to reduce costs and achieve a six-percent saving in CO₂," says Cerf.

For Bolliger, the successful outcome of this project shows how important it is for all project partners to cooperate closely: "This is precisely where our strength lies. We provide our customers with onsite support and are always available. As a result, we are able to work together in challenging situations to find the best solution."

The success story of MasterEase UG 3904 in the "Tunnel de Champel" is part of the "Quantified Sustainable Benefits – Reduce

Your Footprint and Boost Your Bottom Line" sustainability campaign from Master Builders Solutions. This campaign was rolled out across Europe in 2017 and focuses on projects that have enabled customers to improve their productivity while reducing costs and environmental impacts thanks to BASF's advanced chemistry.

In conjunction with its European customers, the Master Builders Solutions experts at BASF use ad motifs and a dedicated website to showcase specific scenarios where high-quality chemistry increases productivity, lowers operating costs and reduces environmental impacts for the customer. Thanks to externally validated assessment tools such as BASF's Eco-Efficiency Analysis or Life Cycle Analyzer, these achievements can be quantified.

The "Tunnel de Champel" is part of the CEVA project. The rail route will connect the **C**ornavin station in Geneva with **E**aux-**V**ives and **A**nnemasse in France and is expected to commence operation in 2019.

Other success stories of the Master Builders Solutions sustainability campaign can be found at:

www.sustainability.master-builders-solutions.basf.com/en

For more details on the products of Master Builders Solutions, please visit: www.master-builders-solutions.basf.com

About the Construction Chemicals division

Under the international Master Builders Solutions trade name, the Construction Chemicals division at BASF offers advanced chemical solutions for the new construction, maintenance, repair, and renovation of structures. Our comprehensive range includes concrete admixtures, cement additives, chemical solutions for underground construction, sealing products, systems for the protection and repair of concrete, high-performance mortar, industrial floors, tile laying systems, expansion joints, and wood protection solutions.

The approximately 6,000 employees in the Construction Chemicals division form a global team of construction experts. To meet the challenges faced by our customers from the planning stage through to the completion of a construction project, we pool our know-how and expertise across all specialist fields and

regions and apply our experience from numerous construction projects around the world. We use global BASF technologies and our in-depth knowledge of local construction requirements to develop innovations that make our customers more successful and advance sustainable construction.

The division operates production facilities and sales locations in more than 60 countries and generated sales of around €2.3 billion in 2016.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 114,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into five segments: Chemicals, Performance Products, Functional Materials & Solutions, Agricultural Solutions, and Oil & Gas. BASF generated global sales of around €58 billion in 2016. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA), and Zurich (BAS). Further information at www.basf.com.