

Products in Practice

Green SenseSM Concrete



The Chemical Company

Introduction

Environmental policy and sustainability are core issues within the concrete construction industry. Producers and contractors are increasingly being expected to preserve natural resources while continuing to produce quality products, and thus are searching for construction methods, practices, and products that will promote these objectives. The shift to an environmentally conscious marketplace requires the innovative development of products, practices and procedures.

The Technology

With Green Sense Concrete, BASF introduces a revolutionary advanced concrete mixture proportioning service that achieves new levels of performance, economics and sustainability. Green Sense Concrete is an environmentally preferable, cost-effective concrete with optimized proportions in which supplementary cementitious materials, non-cementitious fillers, or both, are used with special Glenium[®] high-range water-reducing admixtures to meet or exceed performance targets.

Green Sense Concrete is a new concrete that, relative to a baseline reference mix, attains desired setting characteristics, strength, durability and, if needed, a higher slump at a reduced cost to the producer. The innovative Green Sense Concrete allows producers to increase their profitability, provide the contractor with a user-friendly mix that pumps and places efficiently, and offers the opportunity to positively influence the environment.

Green Sense Concrete Service Concept

The Green Sense Concrete mix optimization service begins with selecting the performance targets for a specific application. BASF then analyzes regionally available raw materials, determines the reactivity levels of cement and supplementary cementitious materials, and matches their performance to regionally formulated chemical admixtures. The combination of BASF's advanced mix optimization software and proportioning expertise results in a customer and application-specific mix design that is economically and ecologically optimized. Figure 1 illustrates the BASF Green Sense Concrete Service Concept.

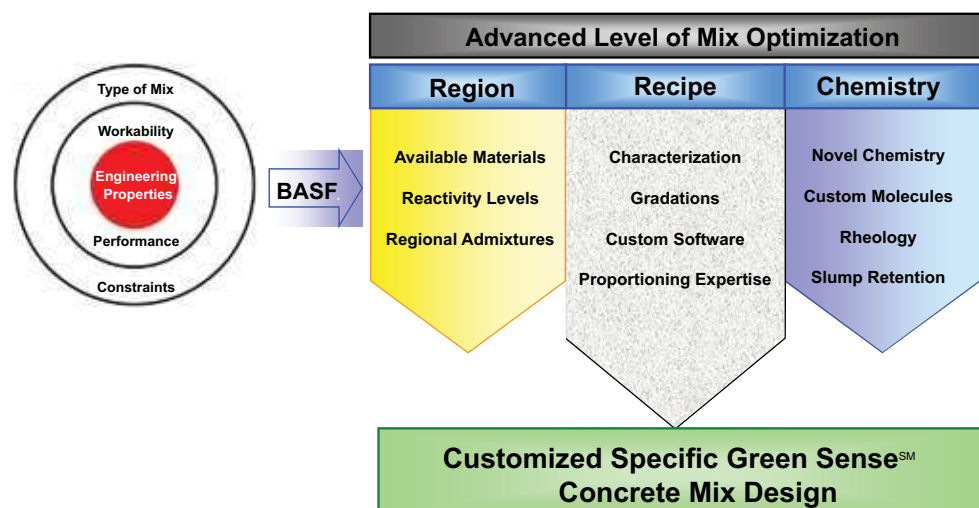


Figure 1. Green Sense Concrete Service Concept

Products In Practice: Green SenseSM Concrete

Benefits of Green Sense Concrete

Because Green Sense Concrete is optimized for cost, performance and environmental impact, many tangible benefits can be realized by the entire construction team.

Producer:

- Optimized and economical concrete composition cost
- Faster truck discharge time - better fleet utilization
- Desired setting time, slump retention, and strength performance
- No water needed at jobsite – less performance issues/ callbacks due to water addition - reduced claim potential

Contractor:

- Highly flowable slump concrete
- Good workability, pumpability and finishing characteristics
- Faster placement and production
- Consistent concrete performance

Owner:

- Desired durability performance
- Lower shrinkage and cracking potential
- Contributes towards LEED credits

Environmental Agencies/Community:

- Less cement used per unit of concrete produced and, therefore, less energy and CO₂ emission
- Less by-product materials targeted for landfill
- Lower overall environmental impact

BASF - Leadership in Innovation

For years, the Admixture Systems business has developed environmentally preferable admixture technologies to help concrete producers solve production and performance challenges. By utilizing supplementary cementitious and non-cementitious materials, combined with carefully engineered chemical admixtures, Green Sense Concrete from BASF capitalizes on usable by-products typically characterized as waste. The result is a concrete that has the strength, durability and operational benefits needed to keep customers satisfied, as well as the economic and environmental benefits needed to remain competitive. Green Sense Concrete is a way to lower the ecological impact of concrete without sacrificing performance.



More Information

For additional information on the various levels of Green Sense technology applications and opportunities, contact your local sales representative.

The Admixture Systems business of BASF Construction Chemicals is a leading provider of innovative admixtures for specialty concrete used in the ready mix, precast, manufactured concrete products, underground construction and paving markets throughout the North American region. The Company's respected Master Builders brand products are used to improve the placing, pumping, finishing, appearance and performance characteristics of concrete.

BASF Construction Chemicals Admixture Systems

www.masterbuilders.com

United States 23700 Chagrin Boulevard, Cleveland, Ohio 44122-5544 • Tel: 800 628-9990 • Fax: 216 839-8821

Canada 1800 Clark Boulevard, Brampton, Ontario L6T 4M7 • Tel: 800 387-5862 • Fax: 905 792-0651

® Construction Research & Technology GMBH

SMBASF Construction Chemicals

© BASF Construction Chemicals 2009 • Printed in USA • 08/09 • LIT # 2000062

**Master
Builders**