SLAG

Product Information Sheet

Slag cement is a cementitious material that offers performance and economic benefits unattainable with cement or other pozzolanic materials. In addition to the benefits offered by other cementitious materials, with replacement rates possibly exceeding 50%, slag cement provides a significant reduction in heat of hydration and a whiter, brighter finished appearance. Slag cement is often used in mass concrete such as dams, bridges and retaining walls, residential and commercial concrete, and high strength and high performance concrete.

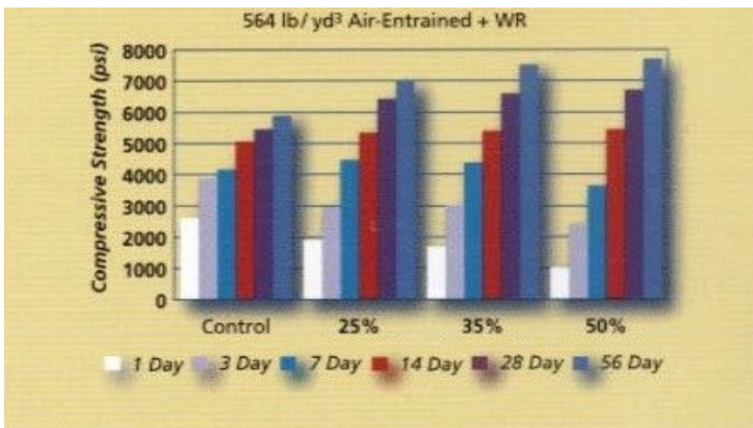
Slag cement is a cementitious product produced during the iron manufacturing process. During this process the iron is heated in a blast furnace to a molten state and the slag rises to the top. When slag is separated from the iron and rapidly cooled with water (granulated), the chemistry of the slag morphs giving it cementitious properties. The granulated slag is then ground to a controlled fineness, typically greater than that of Type I Portland cement.

In accordance with ASTM C989, Specification for Slag Cement for Use in Concrete and Mortars, there are three grades based on 7 and 28 day strength results. Grade 80 has a low activity, grade 100 moderate and grade 120 high.

Benefits:

- Effective replacement rates up to and over 50% offering both performance and economic benefits. (Rate of strength gain and set times may be affected at higher rates.)
- Used in high percentages slag cement has been very effective in reducing both the maximum temperature of the concrete and the rate of temperature rise, resulting in a lower temperature differential between the center of the concrete mass and the exterior of the concrete.
- Reduced permeability and increased durability
- Reducing greenhouse gas emissions by eliminating approximately one ton of carbon dioxide for each ton of Portland cement replaced

- Reduced expansion due to alkali silica reaction (ASR) by reducing the effective alkali loading of the concrete.
- Whiter, brighter finished surfaces increasing safety and reducing the amount necessary artificial lighting. Reducing the "urban heat island" effect by making concrete lighter in color thus reflecting more light and cooling structures and pavements with exposed concrete.
- Increased durability by improving resistance to sulfate attack, mitigating alkali silica reactions, reducing concrete permeability and decreasing concrete temperatures.
- Improved finishability
- Improved pumpability
- Higher 28-day compressive and flexural strengths (grade 100)



For further information please contact one of the following

LaFargeHolcim, Bob Nowicki—603.215.9225, bob.nowicki@lafargeholcim.com

St. Marys Cement, James Palmer—630.294.2151, james.palmer@vcimentos.com

Skyway Cement, Lee Crisp– 630.505.7073—lcrisp@skywaycement.com