

PRODUCT USAGE INFORMATION

Description

HARD-CEM Integral Concrete Hardener is a dry powdered material, which is added integrally into the concrete mix during the batching process. HARD-CEM is engineered to provide concrete with superior hardness and improved durability for demanding construction projects. HARD-CEM is unique in its ability to enhance the integrity of air-entrained and non air-entrained concretes.

Uses/Applications

HARD-CEM provides concrete advantages in applications requiring enhanced hardness/abrasion resistance in industrial, transportation and water resources projects including paving, bridges, parkades, industrial floors, super-flat floors, precast pipe, dams, spillways, stilling basins, erosion control structures, etc.

Addition Rate

The standard recommended dosage of HARD-CEM is 40 kg/m³ (67.4 lb/yd³) concrete, replacing an equal volume of fine sand for yield compensation.

Packaging

HARD-CEM is available in bulk pneumatic and 20 kg (44 lb) paper bags. Custom packaging is available on request.

Storing and Dispensing

When used in bulk, HARD-CEM may be stored in existing cement silos, which have been thoroughly cleaned to prevent contamination. Pneumatic unloading and dispensing of bulk HARD-CEM is similar to that of Portland cement. Bagged HARD-CEM should be stored in a dry area. Manual dispensing by tearing, opening and pouring of contents of bags is the normal method. A suitable dust mask, eye protection, gloves and coveralls are recommended when manually dispensing bagged product. Please consult with the HARD-CEM Material Safety Data Sheet (MSDS) for more complete instructions. (www.hardcem.com/materialsafetydata)

Contact Us

Toll-free 24 hour order desk: 1.866.212.5042
or 1.866.256.1367 www.hardcem.com

For more information contact Cementec 1.403.720.6699
or info@cementec.ca

See related documents on HARD-CEM product usage, performance testing, and project summaries.

HARD-CEM is a registered trademark of Cementec Industries Inc.



Concrete Mix

HARD-CEM is a functional filler additive (not a chemical admixture) which can be used in any concrete mix composition with no major effect on the plastic concrete qualities including slump, air-entrainment and setting time.

Compatibility with Other Admixtures

HARD-CEM is compatible with all conventional water reducers, superplasticizers, air-entraining agents, accelerators and sealers. Trial mixes and pre-testing of concrete are recommended to ensure performance.

Concrete Performance

HARD-CEM will improve the hardness/abrasion resistance properties of concrete. Concrete performance, however, depends on many variables such as concrete materials, batching/mixing, placing and finishing, weather conditions, etc. CSA, ACI and ASTM guidelines must be strictly followed.

Finishing and Curing

For best results, good concrete construction practices must be adhered to while building any concrete floor. Please refer to ACI 302 - Guide to Concrete Floors and Slab Construction for more information. HARD-CEM may reduce the surface bleeding of concrete flatworks. Proper curing practices, such as those referred to in ACI 308 - Standard Practice for Curing Concrete and according to local standards and specifications must be followed.

Cementec Industries

HARD-CEM was engineered by Cementec for concrete subjected to mechanical (direct or water-borne) action causing erosion. Cementec is an award winning engineering, production and distribution company with special expertise in the research and development of proprietary products for the oil & gas and construction industries. Cementec is a member of ACI, the Transportation Research Board, and APEGGA.

Cementec is a strategic partner with Teck Cominco Limited an integrated natural resource and materials company with expertise in exploration, mining, development, smelting, refining and materials processing. Teck Cominco Limited (www.teckcominco.com) provides quality materials and technical solutions to the global marketplace.

Product performance is affected by many factors including storage, method and conditions of application and use. User testing is ESSENTIAL to determine suitability of product for intended method of application and use. Seller's SOLE WARRANTY is that the product has been manufactured to specifications. No oral or written information or advice shall increase this warranty or create new warranties. Seller's SOLE LIABILITY is to replace product proved defective. In no event shall Seller be liable for any consequential, indirect or other damages whether arising from negligence or otherwise.