FLOOR CHEMICALS SAFE FOR USE AROUND FOOD

A variety of L&M Construction Chemicals’ products have been accepted and registered in the NSF Nonfood Compounds Registration Program, including FGS® Hardener Plus™, SEAL HARD™, LION HARD™, FGS Concrete Conditioner, and PermaGuard SPS™. NSF International reviews products’ formulas to determine if they meet standards for health and safety for both installers and building occupants. The NSF Nonfood Compounds Registration Program is a continuation of the USDA product approval and listing program, which is based on meeting federal regulatory requirements. FGS Hardener Plus is a water-based, odorless, and environmentally safe concrete densifier, hardener, sealer, and dustproofer. FGS Concrete Conditioner is a mild, concentrated cleaner and conditioner for hardened, polished concrete floors that rinses clean and does not affect the slip profile of floors. SEAL HARD seals, densifies, hardens, and waterproofs concrete floors and increases wear surface strength. LION HARD is a new generation lithium silicate hardener that also dustproofs and densifies concrete. PermaGuard SPS penetrates and leaves a nondarkening film that effectively protects concrete surfaces from oil drippings and food stains.

—L&M Construction Chemicals
www.lmcc.com

BREAKER DESIGNED FOR LONG LIFE

The HB 3100 heavy hydraulic breaker features a VibroSilenced system that reduces noise and protects the operator and carrier against vibrations. The AutoControl feature adapts the blow frequency and impact energy to the rock hardness, and StartSelect allows the operator to choose the startup and shutdown process of the breaker to match the application at hand. The HB 3100 also features the PowerAdapt system, which shuts down the hydraulic breaker when oil pressure exceeds the maximum input value. It also features an improved box system for better stability and resistance. The dual retaining bar system, for example, provides better protection against wear and tear, especially in the lower part of the hydraulic breaker.

—Atlas Copco
www.atlascopco.us

MARKING SYSTEM ENSURES ROADWAY SAFETY

T-28 is an acrylic-based resin system used for pavement area markings and anti-slip surfacing. It’s typically used for demarcation of bicycle/pedestrian paths, bus stops/lanes, and other specially designated areas. T-28 Color-Safe Surface™ enhances skid-resistance and its color warns travelers of hazardous turns and other high-accident areas on concrete roadways.

—Transpo Industries, Inc.
www.transpo.com
SCREED FEATURES ENVIRONMENTALLY FRIENDLY BATTERY

The battery-powered E-Screed is a precision-engineered, lightweight wet screed for single operator strike off of concrete. Fast and easy to use, this high-frequency screed produces uniform vibration distribution over the entire blade length. It uses a LiFePO4 Lithium Iron Phosphate (safe chemistry technology) 36-volt battery. This environmentally friendly battery will deliver performance and power with every one of its 1500+ life cycles. With zero memory, this battery can be charged at any time and is maintenance free.

—Allen Engineering Corp.  
www.alleneng.com

GROUT OFFERS HIGH EARLY AND ULTIMATE STRENGTHS

1428 HP is a hydraulic-cement-based, nonshrink, load-bearing grout. Its noncorrosive, nonmetallic, mineral-based formulation was developed to have high initial and ultimate flexural and compressive strengths. It can be mixed quickly, as needed, on the job site. This grout offers exceptional workability and is easily placed by pouring or pumping. It’s designed to give nonshrink performance under various conditions for both interior and exterior applications, and it features an extended working time of up to 30 minutes in its fluid state.

—W.R. Meadows, Inc.  
www.wrmeadows.com

MONITORING SOLUTION CAN BE USED IN A VARIETY OF SITUATIONS

Capable of being installed on a variety of structures for both indoor and outdoor environments, the CX1 can measure the sway of a high-rise building, the vibration caused by construction, or the angle of a bridge pier during a flood. This versatile, all-in-one sensor for monitoring many conditions uses industrial-rated components and can operate over extended temperature ranges with high reliability. It’s rated against dust and water intrusion and is designed to provide years of trouble-free service. Its flexible software components can be tailored to specific monitoring needs. For those in need of a complete solution for collecting and analyzing dynamic behavior, CXRecorder and SENSview are easy-to-use applications that clearly show how a structure is performing. Integrating the CX1 into a new or existing monitoring program is made easy with the API and CXCapture command prompt programs.

—SENSR  
www.sensr.com
Retaining wall helps prevent erosion

Versa-Lok retaining walls have been called upon to solve a lot of erosion problems. But few have been as complex or unique as keeping a towering cliff from crumbling into Lake Erie outside of Cleveland, OH.

The project came to Greg Norton, owner of NCS Construction Services, by way of his father, who owned a home atop a 40 ft (12 m) bluff overlooking Lake Erie. The back of the house sits only 20 ft (6 m) from the eroding cliff face. Norton and Chris Andrassy, a Civil Engineer with Andrassy Engineering in nearby Bay Village whose specialty is designing erosion-control structures on the big lake, first attempted to control the erosion in 2001. After securing the necessary permits from the Ohio Department of Natural Resources and U.S. Army Corps of Engineers, large boulders were placed in the lake 20 ft (6 m) from the shore to break the wave action. A few years later, a concrete seawall rising 13 ft (4 m) out of the water was installed at the base of the cliff.

More recently, Norton’s father decided to cover the rest of the bluff face and contacted Andrassy again. There was little room for geogrid, so Andrassy designed a tie-back system with anchor bolts grouted into the cliff. A steel bar was attached to anchor bolts and geogrid was attached to the steel bar to secure the wall to the cliff face.

The existing seawall was used as the footing. The concrete wall extends upward for 17 ft (5 m) and an 18 in. (450 mm) cap rests on top of a ledge chiseled out of the cliff face. A retaining wall constructed of about 3000 Versa-Lok standard units rests on top of the cap.

“With its flexible slot-and-hole pinning system, Versa-Lok was perfect for the application,” says Norton. “It looks awesome.”

—Versa-Lok Retaining Wall Systems
www.versa-lok.com

Precast panels use less concrete

CarbonCast Insulated Architectural Cladding is an insulated sandwich-type wall panel with inner and outer concrete wythes of 1.75 in. (44 mm) or more in thickness. The wythes sandwich a layer of continuous 2 to 4 in. (50 to 100 mm) thick insulation to meet ASHRAE 90.1 2007 requirements. The cladding uses C-GRID® carbon-fiber grid shear trusses to connect the inner and outer wythes of the concrete, creating a strong connection with negligible thermal transfer. The thin concrete wythes result in panels with low embodied energy and weight. CarbonCast Insulated Architectural Cladding features edge-to-edge continuous insulation that delivers 100% of its rated R-value without thermal bridges or solid zones.

—AltusGroup
www.altusprecast.com
The 47th edition of ASTM Standards in Building Codes is available in print, DVD, and online. It contains more than 1300 ASTM construction specifications, practices, and test methods compiled from the Annual Book of ASTM Standards. These standards satisfy the international code requirements established by the International Code Council. This publication helps readers meet international code requirements, stay informed and remain competitive, specify the right material for the job, understand the significance and use of the standards, and speak a common language that the entire industry recognizes.

STP 1511, Special Issue on Recent Advancement in Concrete Freezing-Thawing (F-T) Durability, is also available. The publication features 10 peer-reviewed papers on new techniques for characterizing and predicting the performance of concrete subjected to cycles of freezing and thawing. STP 1511 highlights recent advances in concrete F-T durability and should help facilitate significant improvements in concrete void characterization, F-T durability evaluation, and test specifications.

STP 1514, Durability of Building and Construction Sealants and Adhesives, provides the most recent data from laboratory research and field work in the building and construction industry for all aspects of sealant and adhesive durability. Twenty-one peer-reviewed papers cover a wide variety of topics, including laboratory testing and specialized outdoor exposure testing, factors influencing the durability of sealed joints and adhesive fixations, the development of new test methods and performance-based specifications, and field experience with sealed joints and adhesive fixation.

For more information or to order, visit www.astm.org.

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