



**EUCLID CHEMICAL**

# **MINING** SOLUTIONS



- SHOTCRETE MATERIALS
- CONCRETE ADMIXTURES
- ULTRA/MICRO FINE CEMENTS
- WATERPROOFING SYSTEMS
- SYNTHETIC AND STEEL FIBERS
- CEMENTITIOUS AND CHEMICAL GROUTS

# MINING

## COMPLETE SOLUTIONS

**Throughout the Americas, Euclid Chemical serves the needs of the mining industry with exceptional products, expertise, and value-added services that are second to none.**

Euclid Chemical maintains a unique position as a mining innovation leader and trusted partner by tapping a broad array of technologies, application know-how, development capabilities, and laboratory support.

From concept and planning to testing and hands-on product experience, Euclid Chemical engineering and mining specialists provide solutions for the varying challenges of the mining community. These dedicated professionals are highly experienced and trained to provide real-world solutions that work.

### SHOTCRETE

Euclid Chemical is actively involved in all areas of shotcrete production - from mix design development and proof of concept testing to application guidance and auditing. We offer products for all aspects of shotcrete performance including a formidable range of SURESHOT accelerators and TUF-STRAND fiber technology options. Euclid Chemical also offers shotcrete training and certification as a valuable service to our customers.

#### DRY SHOTCRETE

For this application, Euclid Chemical offers a range of EUCOSHOT premium and specialty packaged shotcrete mixes for dry and/or wet-mix production. For added convenience we also offer a complete line of powdered admixtures including accelerators for use in field-batched dry-mix applications.

#### WET-MIX SHOTCRETE

Euclid Chemical has one of the broadest lines of admixtures for use in wet-mix shotcreting. Included are EUCON set stabilizers, superplasticizers, micro-silica, viscosity modifiers, specialty admixtures, and various types of shotcrete nozzle accelerators.

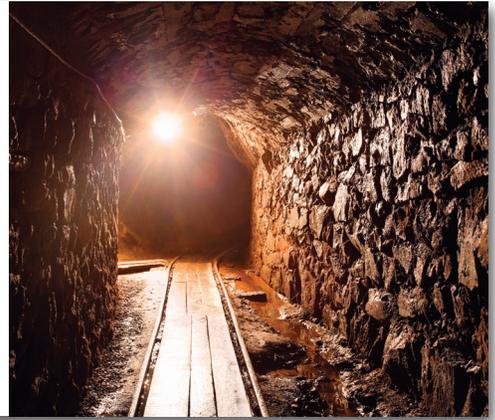
### BACKFILL MIXES

Euclid Chemical manufactures a full line of products developed specifically for this application. Options include accelerators for all types of fills, set stabilizers for rock and paste fills, gelling agents for both hydraulic and paste fill, and water reducers/superplasticizers for improving mix flow, strength development, and overall cement efficiency. In addition, Euclid Chemical offers anti-washout admixtures and flowable-fill agents.

### GROUTING APPLICATIONS

Euclid Chemical supplies a range of packaged cementitious and specialty application chemical grouts. For specific performance site-mixed grouts, our wide portfolio of admixture options can provide a custom solution for any job condition.





## MINING PRODUCT APPLICATIONS

### HARD SURFACING PRODUCTS

Euclid Chemical is a renowned provider of world class concrete flooring options including those for extreme environments. These translate well to the demands of mining and milling operations. Proven, heavy-duty systems that absorb impact, resist cracking, and reduce abrasion will greatly extend the life of these working surfaces.

### ORE PASS AND WASTE PASS LINERS

For dry-mix shotcreting, ore and waste passes can be fortified with customized high-performance mix designs. Fiber-reinforced mixes, micro-silica, and abrasion-resistant aggregates will extend service life under these harsh conditions.

### DRY SHAKE HARDENERS

As one of the early developers of this technology, we offer a variety of EUCO-PLATE, SURFLEX, and DIAMOND PLATE branded products that are applied to fresh concrete substrates. When concreting shaft stations, headframe floors, and underground repair shops, these products resist damage from impact, abrasion, oil staining and absorption. Their high density, steel-troweled surfaces are easier to clean and light reflective versions can improve the safety and efficiency of working environments.

### WATERPROOFING

For dry shotcrete applications requiring water penetration resistance, EUCOSHOT V is available. EUCOSHOT V is micro silica-enhanced for high density, contains micro-fibers for crack resistance, and incorporates crystalline waterproofing technology to inhibit water intrusion. For wet-mix shotcrete, a specialty high-density mix design with an integral water repellent/permeability reducing admixture is recommended.

### CONCRETE SHAFT LININGS

Euclid Chemical offers a complete line of concrete admixtures, fibers, and grouts for the installation or replacement of shaft liners. We have extensive experience with mix design and admixture supply for conventional, special performance, and self-consolidating concrete (SCC) types for shaft and winze construction. To further extend the life of shaft linings in saline environments, Euclid Chemical offers a range of coating and sealing products/technologies.

### FOAMED FILL PRODUCTS

A range of foaming agents and specialized equipment is available from Euclid Chemical. These allow the fluid transport and placement of dry sand for fill applications. For filling underground void space, low density cementitious paste, grout, and concrete mixes can also be produced with very high air content.

### DUST CONTROL

EUCO DUST-DOWN is available for economical dust suppression in underground mines, open pit hauling, or anywhere dust becomes a nuisance or safety hazard.

### CRUSHER STATIONS

Hard surfacing dry-shake products, screedable toppings, and various industrial coatings can be used for the specific needs of this application.

### REPAIR PRODUCTS

When repair is needed to extended the service life of an installation, Euclid Chemical has one or more product options to consider. For milling and processing facilities high-performance repair mortars, epoxies, and fast-setting patching materials are available.

## INDUSTRY LEADERSHIP

For more than a century, The Euclid Chemical Company has served as a leading supplier to the concrete and masonry industry offering a full line of engineered concrete admixture and construction products marketed under the EUCCO brand name. These products include concrete admixtures, block and masonry additives, curing and sealing compounds, epoxy adhesives, floor and wall coatings, structural grouts for columns, equipment and machinery, joint fillers and repair products. The Euclid Chemical Company strives to bring innovative technologies and products to the concrete market with industry leading customer service.

## CUSTOMER SOLUTIONS

The Euclid Chemical Company is unique in our offering of superior products, unparalleled customer service and industry support. The Euclid team delivers a range of value-added resources and in-depth industry experience to architects, designers, engineers, building contractors and owners. Comprised of highly trained professionals who are available in local offices across the Americas, our experts are active members on industry technical committees including American Concrete Institute (ACI), International Concrete Repair Institute (ICRI) and American Society for Testing and Materials (ASTM). Our experienced field team is available to support you and your projects using Euclid Chemical solutions and products manufactured under the stringent standards of our ISO 9000:2008 certified quality system. The Euclid Chemical Company works hand-in-hand with customers:

- performing field evaluations, and troubleshooting on a project-by-project and technology basis.
- assisting in product selection, specification, installation and related technology.
- attending pre-design meetings, assisting in clarifying specifications and recommending product application techniques.

## LABORATORY SERVICES

Our world class Cement and Concrete Reference Laboratory (CCRL) inspected facilities are equipped with state-of-the-art equipment and staffed by an exceptional team of professional, ACI certified technicians. These outstanding resources provide The Euclid Chemical Company the capability to offer comprehensive analytic and petrographic evaluation and testing services via programs that conform to the standards prescribed by the American Society for Testing and Materials, the U.S. Army Corps of Engineers (USACE), the American Concrete Institute and the International Concrete Repair Institute.

## TRAINING

The Euclid Chemical Company generously shares product information and technical knowledge through training and seminars conducted for project owners, contractors, distributors and design professionals. Many programs are AIA/CEU registered, allowing eligible attendees to earn professional development hours. Euclid Chemical is proud to sponsor these opportunities for our associates and colleagues as part of our ongoing commitment to the concrete construction industry.

## BUILDING GREEN

The Euclid Chemical Company offers an extensive line of green products that are specific to LEED guidelines. The LEED (Leadership in Energy & Environmental Design) Green Building Rating System provides a national standard for defining an environmentally friendly, sustainable "green" building. Points awarded to building projects based on water savings, energy efficiency, materials and indoor environmental quality.



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