

# **CONCRETE ADMIXTURES** HIGH PERFORMANCE & SPECIALTY



WATER REDUCERS RETARDERS AIR ENTRAINERS ACCELERATORS SPECIALTY PRODUCTS



## CONCRETE ADMIXTURES HIGH PERFORMANCE & SPECIALTY

**Today's Concrete Practices** require precise time management and predictable results to meet the challenging needs of the construction industry. It has become necessary for concrete producers to meet both economical and environmental constraints, while the requirements for concrete performance have increased. These factors demand a blend of both innovative products and technical expertise.

The Euclid Chemical Company has been providing concrete technology solutions for over a century and has become accustomed to adjusting to the demands of the concrete industry while offering excellent service, exceptional quality and value. We strive to work as a partner with all those involved in the concrete construction design, planning and production processes.

This, along with our desire to bring the latest concrete technologies to our customers, makes Euclid Chemical the perfect partner in concrete construction. We are experts in all concrete applications including the following:

- Self-Consolidating Concrete
- Highly Durable Concrete
- Low Shrinkage Concrete Floors
- Roller-Compacted Concrete
- Freeze-Resistant Concrete

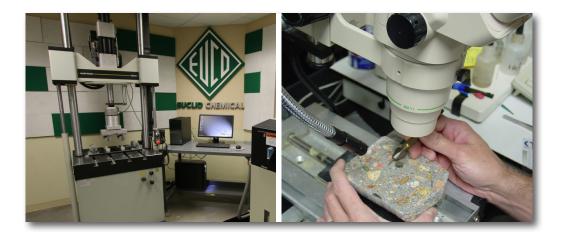
- Fiber Reinforced Concrete
- Concrete Paving
- High-Early Strength Concrete
- Pervious Pavement

### SERVICE BEYOND EXPECTATION

Backed by four decades of leading design expertise, our dispenser systems are known throughout the market for exceptional engineering and superior service.

The Euclid Chemical Company understands that accurate and reliable delivery is critical to our customers' integrity and profitability, and we support our industry associates with the flexibility of custom-built systems designed to meet their changing needs.

**Euclid's expertise**, quick service and field-proven performance provide customers the consistent accuracy and industry-leading dependability required in today's demanding construction environment. At the batch plant or an on-site remote location, it is quality, experience and employee dedication that sets our dispenser technology apart and delivers service that goes beyond your expectations. For technical support, our research and testing facilities are available to assist our customers' needs from concrete mixture design development to hardened properties testing.





## **HIGH PERFORMANCE & SPECIALTY ADMIXTURES**

### CHOOSING THE RIGHT CONCRETE ADMIXTURE

**Euclid Chemical concrete admixtures are developed to meet the challenges of specific applications.** Make an assessment of your individual application and select the ideal Euclid Chemical admixture or contact Euclid Chemical to ensure the right product is being selected.

### **HIGH PERFORMANCE CONCRETE ADMIXTURES**

**Euclid Chemical High-Performance Admixtures** are recognized by the field-proven brands of ACCELGUARD, EUCON, and PLASTOL. They meet the required ASTM Standards and ensure highly durable and predictable concrete for concrete projects. These products provide the highest quality concrete from basic to the most challenging applications.

- Accelerators (ASTM C494 Type C & E)
  - Retarders (ASTM C494 Type B & D)
- Air Entrainers (ASTM C260)
- Water Reducers (ASTM C494 Type A, D, & F)

#### SPECIALTY CONCRETE ADMIXTURES

**Euclid Chemical Specialty Admixtures** are products that have been developed to solve the most unique challenges in concrete construction, which address the demands of individual markets and new concrete technologies. These products help bring value, enhanced durability, and improved concrete performance for specific situations. Euclid Chemical is continually seeking solutions that bring the newest most innovative specialty admixtures to solve the most challenging applications and problems faced in the concrete industry.

- Alkali-Silica Reactivity
- Viscosity Modifiers
- Flowable Fill
- Corrosion Inhibitors
- Microsilica

- Anti-Washout
- Cement/Hydration Stabilizers
- Shrinkage-Reducing Admixtures
- Synthetic Micro and Macro Fibers
- Shrinkage-Compensating Admixtures
- Air Detrainers
- Integral Color
- Integral Waterproofing
- Workability Extending
- Efflorescence Control



## **HIGH PERFORMANCE CONCRETE ADMIXTURES**

#### ACCELERATORS (ASTM C494 Type C & E)

Euclid's premier accelerators are engineered to decrease setting time and increase early strength gain, particularly in cold weather, to expedite the start of finishing operations and reduce finishing time. In addition, they increase the early-strength level to permit earlier form removal and decrease the overall construction time to maximize profitability.

Euclid accelerators can also be used to increase freeze resistance to provide concrete placement at temperatures down to 20 °F (-7 °C).

PRODUCTS	APPLICATIONS
CHLORIDE	<ul> <li>Cold weather concreting</li> <li>Freeze-resistant concrete</li> <li>Fast track construction</li> <li>Fast track repair projects</li> <li>Ready mix</li> <li>Precast/prestressed</li> </ul>
ACCELGUARD STANDARD ACCELGUARD HE	
NON-CHLORIDE	
ACCELGUARD 80 ACCELGUARD 90 ACCELGUARD ACN 200 ACCELGUARD NCA ACCELGUARD G3	

#### AIR ENTRAINERS (ASTM C260)

Designed to protect against freeze-thaw cycling, Euclid's air entraining agents provide exceptional freeze-thaw resistance by developing a proper air-void system within concrete. Our advanced natural and synthetic air entrainers improve the workability and durability of exterior concrete projects and provide an effective, economical alternative to more expensive materials.

#### RETARDERS (ASTM C494 Type B & D)

The EUCON series of retarders relieve many of the difficulties involved in placing and finishing concrete in warmer temperatures. Specifically developed for hot weather concreting, our retarders delay the setting time and improve the hardened properties of concrete.

#### WATER REDUCERS (ASTM C494 Type A & D)

A wide variety of water reducers are available from Euclid Chemical that provide for the lower water content requirement and increased strength properties desired in today's evolved concrete designs. Available in various chemistries, our reducers deliver a range of different setting, finishing and strength characteristics, ensuring you the right product and performance for all your concreting needs.

#### **MID-RANGE REDUCERS**

Outstanding strength gain and enhanced finishability are just a few characteristics that Euclid's mid-range water reducers offer. Exceptionally versatile, Euclid's mid- range water reducers provide a 5-15% water reduction without excessive set retardation for improved workability and superior, long-term performance.

#### **HIGH-RANGE WATER REDUCERS** (ASTM C494 Type F) Euclid provides a wide variety of both naphthalene and the latest polycarboxylate based high-range water reducers to aid in lowering water/cement ratios and increasing slump to produce flowable and self-consolidating concrete.

Our high-range water reducers offer high early strengths and the enhanced workability and pumpability needed in today's competitive concrete construction market. Contact Euclid Chemical to help you determine which product will best fit your applications needs.

EUCON AIR MIX EUCON AIR MIX 200 EUCON AIR MIX 250 EUCON AEA-92 EUCON AEA-92S EUCON AIR 30 EUCON AIR MAC12 EUCON AIR MAC6	<ul> <li>Exterior concrete</li> <li>Freeze-thaw durability</li> <li>Ready mix</li> <li>Precast</li> </ul>			
EUCON RETARDER 75 EUCON RETARDER 100 EUCON NR EUCON LR EUCON HC	<ul> <li>Hot weather concreting</li> <li>Repair projects</li> <li>Pumping concrete</li> <li>Bridge pours</li> </ul>			
EUCON A+ EUCON LW EUCON WR EUCON WR 75 EUCON WR 91 EUCON WRX EUCON NW	<ul> <li>Flatwork</li> <li>Residential</li> <li>General purpose concrete</li> <li>Ready mix</li> <li>Precast</li> </ul>			
EUCON MR EUCON X-15 EUCON X-20 PLASTOL 341/3415 PLASTOL 6420 EUCON MRX	<ul> <li>Flatwork</li> <li>Residential</li> <li>Commercial</li> <li>Architectural concrete</li> <li>Pumping</li> <li>Ready mix</li> <li>Precast</li> </ul>			
NAPHTHALENE BASED	• High performance concrete			
EUCON 37 EUCON 1037 EUCON 537 (TYPE G) EUCON SP	<ul> <li>High performance concrete</li> <li>Self-consolidating concrete</li> <li>Pumping concrete</li> <li>High early strengths</li> <li>Low water to cement ratios</li> <li>Ready mix</li> <li>Precast/prestressed</li> </ul>			
POLYCARBOXYLATE BASED				

PLASTOL 6400 PLASTOL 6425 PLASTOL 6200 EXT PLASTOL 5000 PLASTOL 5700 PLASTOL ULTRA 109 PLASTOL ULTRA 209 PLASTOL SPC

## **SPECIALTY CONCRETE ADMIXTURES**

The Euclid Chemical Company has developed a variety of specialty admixtures formulated to solve unique challenges in concrete construction, which address the demands of individual markets and new concrete technologies.

#### ASR CONTROL (ASTM C494 Type S)

Alkali-silica reactivity control admixtures prevent the formation of damaging gel, eliminating the need to ship non-reactive aggregates from distant locations.

#### VISCOSITY MODIFIERS (ASTM C494 Type S)

Viscosity modifiers are designed to control unwanted bleeding and segregation in self-consolidating concrete.

#### **FLOWABLE FILL**

Flowable fill additives in a ready-to-use liquid will create Controlled Low Strength Material (CLSM) for backfilling utility trenches, old mines and stabilizing substrates.

#### CORROSION INHIBITORS (ASTM C494 Type C & E)

Corrosion inhibitors will help extend the time to corrosion initiation and/or significantly reduce the corrosion rate of embedded metal in concrete containing chlorides in excess of the accepted corrosion threshold value in untreated concrete.

#### ANTI-WASHOUT (ASTM C494 Type S)

Anti-washout admixtures prevent the loss of cement and fine aggregate during the placement of underwater concreting.

#### **CEMENT HYDRATION STABILIZERS** (ASTM C494 Type S)

Cement hydration stabilizers offer a dual function admixture that will stabilize wash-out water to be recycled or can be used to stop hydration and extend the life of concrete.

#### MICROSILICA (ASTM C1240)

Microsilica (ASTM C1240) available in powdered or liquid form, this mineral admixture creates a denser, stronger, more durable concrete.

#### SHRINKAGE REDUCING (ASTM C494 Type S)

& SHRINKAGE COMPENSATING (ACI Type G component) These specialty admixtures are designed to significantly reduce the shrinkage that occurs during concrete drying. Shrinkage reducers will increase the performance, durability, and aesthetics of concrete structures.

#### MICRO & MACRO FIBERS (ASTM C1116)

Micro-and-macro synthetic fibers and steel fibers for shrinkage protection, temperature and shrinkage crack control and limited conventional steel bar/mesh replacement with engineering support.

#### **AIR DETRAINERS**

Admixtures designed to reduce or eliminate the air content in concrete.

#### WORKABILITY EXTENDING

Extended workability admixtures formulated using advanced timerelease polycarboxylate technologies to improve working time.

#### **INTEGRAL CRYSTALLINE WATERPROOFING**

Integral crystalline waterproofing admixture formulated to interact with concrete capillary pore structures.

#### **MCP ADMIXTURES**

Plasticizing, efflorescence-controlling, and water repellent products that improve the production efficiency, aesthetics, and overall integrity of manufactured (machine-made) concrete products.

#### **INTEGRAL COLOR**

Admixtures formulated from special pigments designed to color and beautify concrete, providing a permanent, uniform color that resists weathering and fading.

PRODUCTS	APPLICATIONS		
EUCON INTEGRAL ARC	<ul> <li>Ready mix/precast</li> </ul>		
VISCTROL EUCON ABS	<ul> <li>Control bleeding and segregation</li> <li>Precast self-consolidating concrete</li> <li>Ready mix</li> </ul>		
EUCON EASY FILL	<ul> <li>Controlled low strength materials (CLSM)</li> <li>Utility trenches</li> </ul>	• Pipe bedding	
EUCON CIA EUCON BCN	<ul> <li>Exterior steel reinforced concrete</li> <li>Structural concrete</li> </ul>	<ul> <li>Parking decks</li> <li>Ready mix</li> <li>Precast</li> </ul>	
EUCON AWA	<ul> <li>Underwater concreting</li> <li>Ready mix</li> <li>Cast in place</li> </ul>	I	
EUCON STASIS EUCON DS EUCON WO	<ul> <li>Stabilizing wash water</li> <li>Long hauls</li> </ul>	<ul> <li>Parking decks</li> <li>Ready mix</li> <li>Precast</li> </ul>	
EUCON MSA	<ul> <li>High-strength concrete</li> <li>Low permeability bridge decks</li> </ul>	• Ready mix • Precast	
EUCON SRA FLOOR EUCON SRA-XT CONEX	<ul><li>Big box retail</li><li>Factories</li><li>Warehouses</li></ul>	<ul> <li>Dams</li> <li>Concrete tanks</li> <li>Skating rinks</li> </ul>	
PSI FIBERSTRAND FIBERS TUF-STRAND SF TUF-STRAND MAXTEN PSI STEEL FIBERS	<ul> <li>Big box retail</li> <li>Factories</li> <li>Warehouses</li> </ul>	<ul> <li>Dams</li> <li>Concrete tanks</li> <li>Skating rinks</li> </ul>	
EUCON AIR DOWN EUCON AIR OUT	<ul> <li>Ready-mix concrete</li> <li>Precast concrete</li> <li>Concrete floors</li> </ul>	• Heavy-weight concrete	
PLASTOL AMP X3	<ul> <li>Ready-mix, mass concrete</li> </ul>		
	-		
EUCON VANDEX AM-10	<ul> <li>Water treatment facilities</li> <li>Parking structures</li> <li>Tunnels</li> </ul>		
EUCON HYDRAPEL Series EUCON PAVERTITE EUCON BLOCKTITE/ SYSTEM EUCON FOR-CAST (various)	<ul> <li>Concrete block</li> <li>Hollow-core plank</li> <li>Patio products</li> <li>Dry-cast pipe &amp; precast</li> </ul>	<ul><li>Pavers</li><li>Concrete tile</li><li>Cast stone</li></ul>	
COLOR-CRETE - Powdered Colors - Liquid Colors - Granular Colors	Wherever integral colorants or colorant admixtures are specified		

## **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 EUCO 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 indepth 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 9001 certified quality system. The Euclid Chemical Company works hand-in-hand with customers:

- supplying field evaluations, recommendations and application problem-solving on a project-byproject and technology basis.
- assisting in product selection, specification, installation and related technology.
- attending pre-design meetings, assisting in clarifying specifications and recommending product selection.
- supporting you by providing proper pre-installation instructions and methods for achieving quality results.

## LABORATORY SERVICES

Our world class Cement and Concrete Reference Laboratory (CCRL) inspected facilities are equipped with state-of-the-art technologies 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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