



# ACCELGUARD® NCA

NON-CHLORIDE, ACCELERATING & WATER REDUCING ADMIXTURE

EUCLID CHEMICAL

ACCELERATORS

## DESCRIPTION

**ACCELGUARD NCA** is an accelerating and water reducing admixture for concrete. It improves properties of plastic and hardened concrete, provides a significant improvement in early stiffening and setting characteristics, improved workability and decreased bleeding and segregation. ACCELGUARD NCA contains no added chlorides or chemicals known to promote the corrosion of steel, is compatible with air-entraining admixtures, HRWR admixtures (super plasticizers), and conventional water reducing admixtures. ACCELGUARD NCA works well at all temperatures but has shown to be most effective in the 35°F to 50°F (2°C to 10°C).

## PRIMARY APPLICATIONS

- Cold weather concreting
- Structural and plain concrete
- Precast and post tensioned concrete

## FEATURES/BENEFITS

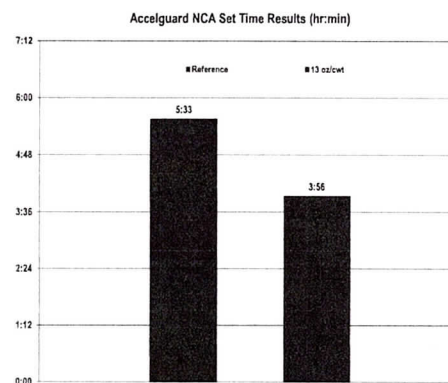
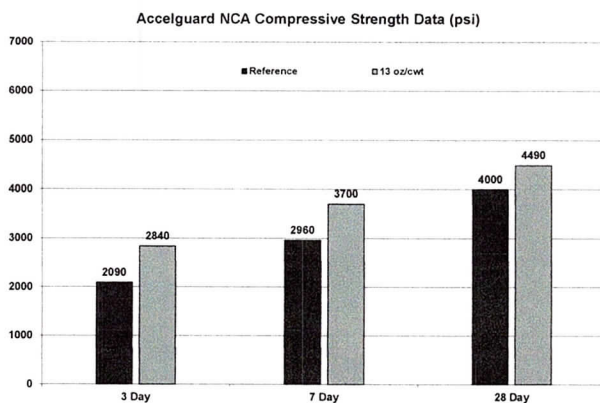
- Reduces initial set 1 to 4 hours depending on concrete temperatures
- Improves workability and provides denser concrete
- Minimizes bleeding and segregation
- Improves compressive strength development at early ages
- Decreases overtime allowing earlier finishing
- Increases protection for reinforcement in concrete
- Decreases concrete form stripping times

## TECHNICAL INFORMATION

### Performance Data

The following test results were achieved using typical ASTM C 494 mix design requirements, 517 lb/yd<sup>3</sup> (307 kg/m<sup>3</sup>) cement content and similar (± 0.5)% air content.

These results were obtained under laboratory conditions with materials and mix designs meeting the specifications of ASTM C 494. Changes in materials and mix designs can affect the dosage response of ACCELGUARD NCA.



ACCELGUARD® NCA

MASTER FORMAT #:  
03 30 00 03 40 00

## SHELF LIFE

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2 years in original, unopened container.

## PACKAGING

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ACCELGUARD NCA is packaged in bulk, 275 gal (1041 L) totes, 55 gal (208 L) drums and 5 gal (18.9 L) pails.

## SPECIFICATIONS/COMPLIANCES

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- Fully complies with ASTM C 494, Type C and E admixture specifications.
- Fully complies with AASHTO M 194.
- ACI 201, Guide for Durable Concrete and ACI 302 Guide for Concrete Floor and Slab Construction prohibit the use of chlorides in many types of concrete. ACCELGUARD NCA may be used in these types of concrete. Examples of which are: floors over prestressed concrete or galvanized decking, floors containing two kinds of embedded metal, reinforced concrete in moist environments and/or exposed to chloride deicing salts.

## DIRECTIONS FOR USE

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The typical dosage range for ACCELGUARD NCA is 12 - 75 oz per 100 lbs (780 - 4890 mL/100kg) of cementitious material. Higher dosages are acceptable with prior testing and confirmation of the desired performance with specific materials being used.

ACCELGUARD NCA should be added to the initial batch water of the concrete mixture. Do not dispense onto dry cement. For ambient temperatures below 50°F (10°C) follow ACI 306 Cold Weather Requirements.

## PRECAUTIONS/LIMITATIONS

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- ACCELGUARD NCA will freeze at temperatures of approximately -15°F (-26°C). Freezing and thawing will not harm the material if thoroughly agitated.
- Do not use air for agitation.
- Keep concrete from freezing until a minimum of 500 psi (3.5 MPa) is achieved.
- In all cases, consult the Safety Data Sheet before use.

Rev. 08.19

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# EUCON 1037

## HIGH RANGE WATER REDUCER - SUPERPLASTICIZER

HIGH-RANGE WATER REDUCERS

EUCON 1037

MASTER FORMAT #:  
03 30 00 03 40 00  
03 70 00

### DESCRIPTION

**EUCON 1037** is a high range water reducing admixture. It may be added to the concrete at the job site or at the ready mix concrete plant. EUCON 1037 is formulated to retain plastic consistency for 30-60 minutes after dosing, depending on the initial slumps, dosage rates, and ambient temperature. EUCON 1037 contains no added chlorides or chemicals known to promote the corrosion of steel.

### PRIMARY APPLICATIONS

- High performance concrete
- General ready mix concrete
- Heavily reinforced concrete
- Flatwork and mass concrete
- Prestressed concrete
- Low water/cement ratio concrete
- High slump, flowable concrete

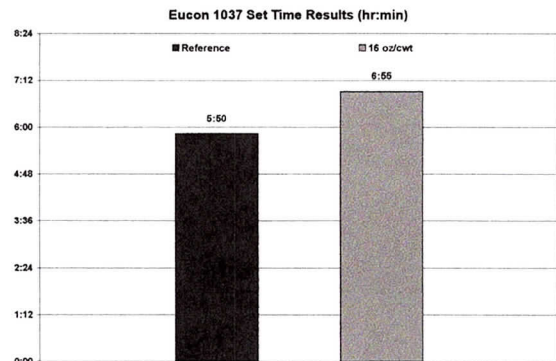
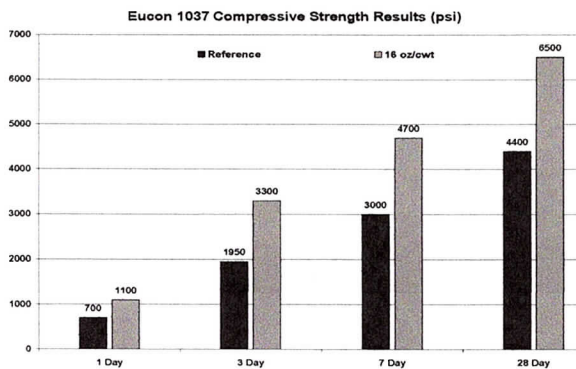
### FEATURES/BENEFITS

- Aids in producing low water/cement ratio concrete allowing higher strengths
- Produces flowing concrete
- Produces high early strengths when used in precast work with Type I cement
- Aids in concrete placement and reduces labor cost

### TECHNICAL INFORMATION

#### Performance Data:

The following test results were achieved using typical ASTM C 494 mix design requirements, 517 lb/yd<sup>3</sup> (307 kg/m<sup>3</sup>) cement content and similar ( $\pm 0.5$ )% air content. These results were obtained under laboratory conditions with materials and mix designs meeting the specifications of ASTM C 494. Changes in materials and mix designs can affect the dosage response of EUCON 1037.



## PACKAGING

EUCON 1037 is packaged in bulk, 275 gal (1041 L) totes, 55 gal (208 L) drums and 5 gal (18.9 L) pails.

## SHELF LIFE

2 years in original, unopened package.

## SPECIFICATIONS/COMPLIANCES

- Fully complies with the requirements of ASTM C 494, Types A & F admixtures.
- Fully complies with the requirements of AASHTO M 194.
- ANSI/NSF STD 61

## DIRECTIONS FOR USE

EUCON 1037 has a recommended dosage range of 8 to 25 oz per 100 lbs (520 to 1630 mL per 100 kg) of cementitious material. Dosage recommendations depend on the characteristics of the materials being used in the mix design. Higher dosages are acceptable with prior testing and confirmation of the desired performance with specific materials used.

For any concrete application including Self-Consolidating Concrete (SCC), the dosage of EUCON 1037 will vary depending on the mix design, local materials, and individual needs of the concrete producer. Trial mixes should be run to verify plastic and hardened performance with local materials. If the material gradations are not optimum for SCC, a viscosity modifier may be used to improve the quality of the mix. Please consult a local Euclid Chemical Sales Professional for trial mixtures and dosage recommendations.

EUCON 1037 can be added to the initial batch water or directly on the freshly batched concrete and mixed for approximately 5 minutes or 70 revolutions. However, better results have been observed batching directly on the freshly batched concrete. It should not come into contact with dry cement or other admixtures until mixed thoroughly with the concrete batch.

EUCON 1037 is compatible with most admixtures including air-entraining agents, accelerators, most water-reducers, retarders, shrinkage reducers, corrosion inhibitors, viscosity modifiers, and microsilica; however, each material should be added to the concrete separately.

**Figure 1:** Recommended Dosage of Eucon 1037 to achieve flowable concrete (7-9" / 180 - 230 mm slump)

Initial Slump, inches (mm)	Dosage Range of Eucon 1037, oz/cwt (mL/100 kg)
4 (100)	8 - 10 (520 - 650)
3 (75)	10 - 12 (650 - 780)
2 1/2 (65)	12 - 14 (780 - 910)
2 (50)	14 - 16 (910 - 1040)
1 1/2 (40)	16 - 18 (1040 - 1170)

### Placement

Concrete treated with EUCON 1037 may be placed in the same fashion as conventional concrete.

### Formwork

Forms for walls or narrow sections must be watertight, strong and have good bracing. During the "flowing period", when the concrete is at a slump of 7" to 9" (180-230 mm), the concrete will exert a higher pressure at the base of the form than conventional concrete. Formwork for slabs is the same as for conventional concrete.

## PRECAUTIONS / LIMITATIONS

- Care should be taken to maintain EUCON 1037 above freezing; however, freezing and subsequent thawing will not harm the material if thoroughly agitated. Never agitate with air or an air lance.
- In all cases, consult the Safety Data Sheet before use.

Rev. 08.19

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# EUCON AIR MIX 200

## CONCENTRATED AIR ENTRAINING AGENT FOR CONCRETE

### DESCRIPTION

**EUCON AIR MIX 200** is a concentrated aqueous solution of modified resins used for proper air control under a wide range of temperatures. EUCON AIR MIX 200 is specifically formulated for use as an air entraining admixture for concrete of all types and is manufactured under rigid control which assures uniform and precise performance. It is compatible with concrete mixes containing accelerators, water reducing admixtures and high range water reducing admixtures. It should be added to the mix independently and contains no added chlorides or chemicals known to promote the corrosion of steel.

### PRIMARY APPLICATIONS

- Ready mixed concrete
- Structural concrete
- Mass concrete construction
- Paving concrete
- Exterior concrete work exposed to freeze/thaw conditions

### FEATURES/BENEFITS

- Provides a stable air void system with proper bubble size and spacing. This air void system protects concrete against damage caused by repeated freeze/thaw cycles
- Concrete is made more resistant to de-icing salts and sulfate attack
- Less mixing water can be used per yard (meter) of concrete and placeability is improved
- Minimizes bleeding and segregation

### SHELF LIFE

2 years in original, unopened package.

### SPECIFICATIONS/COMPLIANCES

EUCON AIR MIX 200 meets or exceeds the requirements of the following specifications:

- ASTM C 260
- AASHTO M 154

### DIRECTIONS FOR USE

EUCON AIR MIX 200 is typically dosed at a rate of 0.5 to 1 oz per 100 lbs (30 to 65 mL per 100 kg) of total cementitious material to entrain 3% - 6% air content. The amount of EUCON AIR MIX 200 will vary depending on type of cement, fineness of sand, temperature, design of the mix, other admixtures, etc. Concrete mixes must be tested regularly to confirm that proper air content is achieved.

### PRECAUTIONS/LIMITATIONS

- Consult your local Euclid Chemical representative for the proper dosage rate adjustments when using fly ash, slag or high range water reducers.
- If material has frozen, warm material to 70°F (21°C) and agitate for 6 to 8 hours.
- Add to mix independent of other admixtures.
- In all cases, consult the Safety Data Sheet before use.

Rev. 01.19

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# DARAPEL®

Integral water repellent admixture

## Product Description

DARAPEL® admixture is a stable dispersion of stearate and other water repellent compounds that is added into ready mixed concrete during mixing. DARAPEL® is a ready-to-use, factory prepared liquid that will simplify handling and eliminate guesswork.

## Uses

Architects, engineers, contractors and other authorities agree that even good quality concretes, mortars, etc. that are properly placed, set or applied then cured, are inherently porous or permeable to water. The free passage of moisture occurs in pores formed during and after placing. DARAPEL® forms an internal barrier against water transmission in mixes used for ready mixed or precast concrete.

## Performance

The addition of DARAPEL® to the mix will provide hydrophobic (water-repelling) properties. The water insoluble stearate acts as a non-wettable lining on the walls of all pores and voids in the mix, making them water repellent. The DARAPEL® "built-in" water barriers guard against damage caused by water infiltration.

## Improved Product Quality

Higher quality concrete will result from the use of DARAPEL®. The workability of mixes will be improved especially in low cement content concrete mixes. The protection of embedded steel and resistance to bacteria or fungus growth may also be increased by keeping the concrete drier.

## Product Advantages

The addition of DARAPEL® will reduce the amount of water that permeates through the concrete. Reducing the passage of water will provide beneficial advantages by:

- Increasing resistance to weathering
  - wetting and drying
  - freezing and thawing
- Increase resistance to chemical attack
- Reduce the potential for efflorescence
- Reduce the probability of corrosion of embedded meta

## Air Content

Added by itself, DARAPEL<sup>®</sup> may have a slight effect on the entrained air volume. Trial mixes or field tests are recommended to evaluate its effect with your material at your plant. Over-dosing can cause variations in air content.

## Curing

Proper curing of the in-place mix is vital. Allowing the mix to prematurely dry out should be prevented because re-wetting (and continued hydration) may not be effective.

## Dispensing Equipment

It is recommended that DARAPEL<sup>®</sup> be dispensed into the concrete and thoroughly mixed to provide complete dispersion. DARAPEL<sup>®</sup> can be added at any point during the charging of the mixer.

A complete line of automated, high precision dispensing equipment is available for plant installation through your GCP admixtures representative.

## Packaging and Handling

DARAPEL<sup>®</sup> is available in totes, drums and pails.

DARAPEL<sup>®</sup> will freeze at approximately 32°F (0°C) and cannot be remixed after freezing.

## Flammability

None.

## Addition Rates

The amount of DARAPEL<sup>®</sup> necessary for a specific mix depends upon the degree of water repellency desired. Suggested addition rates for DARAPEL<sup>®</sup> in ready mixed or precast concrete are 3.0 to 6.0 fl oz/100 lb (190 to 390 mL/100 kg) of cement.

## Compatibility with Other Admixtures and Batch Sequencing

DARAPEL<sup>®</sup> can be added to mixes containing other admixtures. Testing with actual materials should be done to determine performance. Each admixture must be added separately to the mix. Do not allow any of the admixtures to contact each other before they enter the mix.



## The GCP Advantage in Admixtures

DARAPEL® was developed by GCP Applied Technologies – recognized world-wide as a leader in concrete admixture technology. Pioneers in this specialized field for over 50 years, we operate one of the largest privately owned cement and concrete research laboratories.

Our admixtures are manufactured in modern U.S. and Canadian plants, under strict quality controls which assure their quality, uniformity and performance. Highly trained GCP admixture specialists are ready to assist you in their use.

Today, when so much depends on every element of a construction project, you can rely on the special combination of experience, product quality and technical support which are the “GCP Advantage” in admixtures.

[gcpat.com](http://gcpat.com) | North America Customer Service: 1 877-4AD-MIX1 (1 877-423-6491)

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