



Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format. The section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings. Delete all “Specifier Notes” when editing this section.

SECTION 03050

CONCRETE ADMIXTURES

Specifier Notes: This section covers the following Euclid admixtures for concrete: “AEA-92”, “Air Mix 200”, “Accelguard® 80”, “Accelguard® 90”, “Accelguard® NCA”, “Accelguard® DSA”, “Eucon Retarder 75”, “Eucon A+”, “Eucon WR 89”, “Eucon WR 91”, “Plastol 341”, “Eucon 37”, “Eucon 537”, “Eucon 1037”, “Plastol 5000”, and “Eucon CIA”. Consult Euclid for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Admixtures for concrete.

1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 03300 - Cast-in-Place Concrete.
- B. Section 03400 - Precast Concrete.

1.3 REFERENCES

Specifier Notes: Include only the references used with the materials specified in PART 2 - PRODUCTS. Delete the other references.

- A. AASHTO M 154 - Air-Entraining Admixtures for Concrete.
- B. AASHTO M 194 - Chemical Admixtures for Concrete.
- C. ANSI/NSF 61 - Drinking Water System Components - Health Effects.
- D. ASTM C 94 - Ready-Mixed Concrete.
- E. ASTM C 260 - Air-Entraining Admixtures for Concrete.
- F. ASTM C 494 - Chemical Admixtures for Concrete.
- G. ASTM C 1017 - Chemical Admixtures for Use in Producing Flowing Concrete.
- H. COE CRD-C 13 - Air-Entraining Admixtures for Concrete.
- I. COE CRD-C 87 - Chemical Admixtures for Concrete.

1.4 SUBMITTALS

- A. Comply with Section 01330 - Submittal Procedures.
- B. Product Data: Submit manufacturer's product data.
- C. Manufacturer's Certification: Submit manufacturer's ISO 9001/9002 certification.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: ISO 9001/9002 registered or provide proof of documented quality assurance system. Quality assurance system shall be registered by independent registrar accredited by ANSI Registrar Accreditation Board (ANSI-RAB) or by another internationally recognized body.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery:
 - 1. Containers: Deliver admixtures in manufacturer's original unopened containers, with labels clearly identifying:
 - a. Material name.
 - b. Manufacturer.
 - c. Volume of material.
 - d. Date of manufacture.
 - 2. Bulk: Deliver admixtures to concrete batch plant in bulk shipment protected from contamination and moisture, with documentation clearly identifying:
 - a. Material name.
 - b. Manufacturer.
 - c. Volume of material.
 - d. Date of manufacture.
- B. Storage:
 - 1. Containers: Store containers in a clean dry area in accordance with manufacturer's instructions. Keep containers sealed until ready for use.
 - 2. Bulk: Store bulk admixtures in clean dry storage tanks in accordance with manufacturer's

instructions.

3. Protect admixtures from freezing.

Specifier Notes: Include the following paragraph when specifying Accelguard 90. The admixture cannot be reconstituted if frozen.

4. Accelguard 90: Store at a minimum of 50 degrees F (10 degrees C). Do not use admixture once frozen.

- C. Handling: Protect admixtures during handling, batching, and mixing to prevent damage or contamination.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. The Euclid Chemical Company, 19218 Redwood Road, Cleveland, Ohio 44110. Toll Free (800) 321-7628. Phone (216) 531-9222. Fax (216) 531-9596. Web Site www.euclidchemical.com.

Specifier Notes: Specify the concrete admixtures required for the specific application. Delete admixtures not required. Consult Euclid for assistance in determining the required admixtures.

2.2 AIR-ENTRAINING ADMIXTURES

- A. Admixture: AEA-92.
 1. Description: Air-entraining admixture for concrete.
 2. Compliance:
 - a. ASTM C 260.
 - b. AASHTO M 154.
 - c. ANSI/NSF 61.
 - d. COE CRD-C 13.
- B. Admixture: Air Mix 200.
 1. Description: Air-entraining admixture for concrete.
 2. Compliance:
 - a. ASTM C 260.
 - b. AASHTO M 154.

2.3 ACCELERATING ADMIXTURES

- A. Admixture: Accelguard 80.
 1. Description: Accelerating water-reducing admixture for concrete. Does not contain calcium chloride or added chloride ions.
 2. Compliance:
 - a. ASTM C 494, Types C and E.
 - b. AASHTO M 194.
- B. Admixture: Accelguard 90.
 1. Description: Accelerating water-reducing admixture for concrete. Does not contain calcium chloride or added chloride ions.
 2. Compliance:

- a. ASTM C 494, Types C and E.
 - b. AASHTO M 194.
- C. Admixture: Accelguard NCA.
- 1. Description: Accelerating water-reducing admixture for concrete. Does not contain calcium chloride or added chloride ions.
 - 2. Compliance:
 - a. ASTM C 494, Types C and E.
 - b. AASHTO M 194.
- D. Admixture: Accelguard DSA.
- 1. Description: Accelerating water-reducing admixture for concrete. Does not contain added chlorides.
 - 2. Compliance:
 - a. ASTM C 494, Types C and E.
 - b. AASHTO M 194.

2.4 RETARDING ADMIXTURES

- A. Admixture: Eucon Retarder 75.
- 1. Description: Water-reducing and set-retarding admixture for concrete. Does not contain calcium chloride or other potential corrosion-enhancing materials.
 - 2. Compliance:
 - a. ASTM C 494, Type D.
 - b. AASHTO M 194.
 - c. ANSI/NSF 61.

2.5 STANDARD WATER-REDUCING ADMIXTURES

- A. Admixture: Eucon A+.
- 1. Description: Fast-setting and plasticizing water-reducing admixture for concrete. Does not contain calcium chloride or other potential corrosion-enhancing materials.
 - 2. Compliance:
 - a. ASTM C 494, Type A.
 - b. AASHTO M 194.
- B. Admixture: Eucon WR 89.
- 1. Description: Plasticizing water-reducing admixture for concrete. Does not contain calcium chloride or other potential corrosion-enhancing materials.
 - 2. Compliance:
 - a. ASTM C 494, Type A.
 - b. AASHTO M 194.
- C. Admixture: Eucon WR 91.
- 1. Description: Water-reducing and set-retarding admixture for concrete. Does not contain calcium chloride or other potential corrosion-enhancing materials.
 - 2. Compliance:
 - a. ASTM C 494, Types A and D.
 - b. AASHTO M 194.
 - c. ANSI/NSF 61.

2.6 MID-RANGE WATER-REDUCING ADMIXTURES

A. Admixture: Plastol 341

1. Description: Mid-range water-reducing admixture for concrete. Does not contain added chlorides.
2. Compliance:
 - a. ASTM C 494, Types A and F.
 - b. ASTM C 1017.
 - c. AASHTO M 194, Types A and F.

2.7 HIGH-RANGE WATER-REDUCING ADMIXTURES

A. Admixture: Eucon 37.

1. Description: High-range water-reducing admixture for concrete.
2. Compliance:
 - a. ASTM C 494, Types A and F.
 - b. AASHTO M 194.
 - c. ANSI/NSF 61.

B. Admixture: Eucon 537.

1. Description: High-range water-reducing and set-retarding admixture for concrete.
2. Compliance:
 - a. ASTM C 494, Type G.
 - b. AASHTO M 194.

C. Admixture: Eucon 1037.

1. Description: High-range water-reducing admixture for concrete. Does not contain added chlorides.
2. Compliance:
 - a. ASTM C 494, Types A and F.
 - b. AASHTO M 194.

D. Admixture: Plastol 5000.

1. Description: High-range water-reducing admixture for concrete. Does not contain added chlorides.
2. Compliance:
 - a. ASTM C 494, Type F.
 - b. AASHTO M 194, Type F.

2.8 CORROSION-INHIBITING ADMIXTURES

A. Admixture: Eucon CIA.

1. Description: Corrosion-inhibiting admixture for concrete. Inhibits corrosion of steel reinforcement in concrete. Contains 30 percent calcium nitrite solution.
2. Compliance:
 - a. ASTM C 494, Type C.
 - b. AASHTO M 194, Type C.
 - c. COE CRD-C 87, Type C.

2.9 MIX DESIGN

Specifier Notes: Specify Section 03300 for cast-in-place concrete or Section 03400 for precast concrete.

- A. Concrete Mix Design:
 - 1. As specified in Section [03300] [03400] [03_____].
 - 2. Evaluate concrete mix design with specified admixtures. Use concrete materials representative of those proposed for use.
- B. Compatibility of Materials:
 - 1. Verify compatibility of admixtures with each other and with other materials in concrete mix.
 - 2. Obtain admixtures from single manufacturer.

PART 3 EXECUTION

3.1 BATCHING AND MIXING

Specifier Notes: Specify Section 03300 for cast-in-place concrete or Section 03400 for precast concrete.

- A. Batch and mix admixtures in accordance with manufacturer's instructions, ASTM C 94, and as specified in Section [03300] [03400] [03_____].
- B. Add admixtures to concrete at dosage rate in accordance with manufacturer's instructions and as determined by concrete mix design.
- C. Do not dispense admixtures onto dry cement.
- D. Add each admixture separately to concrete mix.

3.2 FIELD QUALITY CONTROL

- A. Dispensing Admixtures:
 - 1. Dispense admixtures using automatic dispensing equipment owned and maintained by admixture manufacturer.
 - 2. Calibrate and certify dispensing equipment to assure proper quantities of admixtures are added to each batch of concrete.
 - 3. Document quantity of admixtures added to each batch of concrete.

Specifier Notes: Specify Section 03300 for cast-in-place concrete or Section 03400 for precast concrete.

- B. Inspection and Testing of Concrete: As specified in Section [03300] [03400] [03_____].
- C. Manufacturer's Field Services: Manufacturer's representative shall provide technical assistance as required.

END OF SECTION