LETTER OF TRANSMITTAL

FRANK A. ANZALONE
GENERAL CONTRACTOR
1401 Derek Drive, Suite B
Hammond, LA 70403
Phone: (985) 542-2744
Fax: (985) 230-0614

Date: 05/31/16      FAA Job No. 157
Attention: Mr. Brent Guilbeau - Coleman Partners
3377 North Boulevard
Baton Rouge, LA 70806

RE: 157 - Mayfield Elementary School Additions
601-001, 03300-001/002 Cast In Place Concrete
04810-001 Unit Masonry - Mortar and Grout

WE ARE SENDING YOU
☑ Attached       ☐ Under Separate Cover Via
☐ Shop Drawings ☐ Change Order       ☐ Other
☑ Product Data   ☐ Specifications
☐ Samples       ☐ Prints

ITEM NO.        COPIES       DESCRIPTION
001 1           601-001 Portand Cement Paving - Mix Design with Break Reports
002 1           03300-001 Cast In Place Concrete - Mix Design with Break Reports
               03300-002 Cast In Place Concrete - Accessories/Additives Product Data
               04810-001 Unit Masonry Assemblies - Section 2.9 - Mortar and Grout Mixes, Item D - Grout for Unit Masonry - Mix Designs

THESE ITEMS ARE TRANSMITTED:
☑ For Approval       ☐ Approved As Submitted
☐ For Your Use       ☐ Approved As Noted
☐ As Requested       ☐ Returned For Correction
☑ For Review and Comment       ☐ Revise and Resubmit

REMARKS: Brent: Please see the attached Concrete Mix Designs with Breaks, Including Additive Product Data.

   Thanks - Wilson

SIGNED: Wilson Alvarez
April 5, 2016

Frank A. Anzalone General Contractor, Inc.
1401 Derek Drive, Suite B
Hammond, LA 70403

Attention: Mr. Frank Anzalone

RE  Henry Mayfield Elementary School
    Classroom Wing Addition
    STPSB Project No. 1495
    31820 Hwy 190 West
    Slidell, Louisiana 70460

MIX NO.:  103  3000 PSI @ 28 Days  Structural
          123  4000 PSI @ 28 Days  Structural
          023  4000 PSI @ 28 Days  Paving Mix
          119-VTP 2000 PSI @ 28 Days  C.M.U. Fill

Gentlemen:

The attached concrete mix designs utilizing the appropriate ASTM C-33 or ASTM C-330 aggregates is proposed for use on the above referenced project for ready mix concrete to be furnished by Standard Materials, LLC.

Standard Materials certifies that the above mix designs, when ordered by specified design identity, will meet or exceed the indicated design strength at a designated age when tested in accordance with the applicable and current ASTM Standards C 31, C 39, C 78, C172, C 293, applicable provisions of C 94, and evaluated in accordance with applicable provisions of the ACI 318 Building Code.

Please contact us if you have any questions or require any additional information. Please notify Standard Materials of approval of the proposed mix designs prior to their use.

Sincerely,

Standard Materials, LLC

Brian S. Moore
Quality Assurance Manager
MIX #: 103  MIX DESCRIPTION: 3000 PSI @ 28 Days  TYPE: Normal Weight
PROJECT: Henry Mayfield Elementary  CLASS: 3000 PSI @ 28 Days
ADDRESS: 31820 Hwy 190 West  Flex @ 
LOCATION: Slidell, LA  PUMPABLE: Yes
APPLICATION: Structural

CONTRACTOR: Frank A. Analone Gen. Contractor, Inc.

TO BE ORDERED BY CONTRACTOR

CEMENTITIOUS

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<tr>
<th>CEMENT</th>
<th>ASTM</th>
<th>TYPE</th>
<th>BRAND</th>
<th>SP/GRAV</th>
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AGGREGATES

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<th>SP/GRAV</th>
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<td>FINE SAND</td>
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MIX DESIGN AIR CONTENT 5.0 (+/- 1.5)%

W/C RATIO 0.50  CEM. EQUIVALENCY 5.00  SACKS  YIELD CU. FT. 27.00

WATER REDUCING ADMIXTURES ASTM-494

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<tr>
<th>BRAND</th>
<th>TYPE</th>
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<td>Optional 37.60 OZS.</td>
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NOTE: Normal set water reducer dosages vary according to seasonal temperatures. Adjustments are based on the manufactures recommendations. Retarders and accelerators to adjust set times and HRWR will be used at the customers request and are priced separately.

AIR ENTRAINING ADMIXTURE ASTM C-260

<table>
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<tr>
<th>BRAND</th>
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<tbody>
<tr>
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MIX DESIGN AIR CONTENT 5.0 (+/- 1.5)%

1) STANDARD MATERIALS WILL HONOR STRENGTH INDICATED AT A MAXIMUM 4" (+/- 1.0) SLUMP.
2) ICE, WHEN USED FOR TEMPERATURE CONTROL, REPLACES MIXING WATER POUND FOR POUND AND IS PRICED SEPARATELY.
3) FOR FLY ASH DESIGNS, W/C (Water Cementitious) RATIO IS COMPUTED USING CEMENT+FLY ASH PER ACI 211.1
<table>
<thead>
<tr>
<th>Cast date</th>
<th>Sample ID</th>
<th>Slump</th>
<th>% Air</th>
<th>Conc Temp</th>
<th>Air Temperature</th>
<th>7 Day PSI</th>
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<th>Avg 3 - 28 Day</th>
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Number of observations: 15
MIX #: 123  MIX DESCRIPTION: 4000 PSI @ 28 Days / No AEA  TYPE: Normal Weight

PROJECT: Henry Mayfield Elementary  CLASS: 4000 PSI @ 28 Days
ADDRESS: 31820 Hwy 190 West  PUMPABLE: Yes
LOCATION: Slidell, LA  ADDITIVES: TO BE ORDERED BY CONTRACTOR
APPLICATION: Structural

CONTRACTOR: Frank A. Analone Gen. Contractor, Inc.

CEMENTITIOUS  ASTM  TYPE  BRAND  SP/GRAV  S.S.D. WEIGHTS

CEMENT  C-150  I/II  HOLCIM  3.15  416 LBS.
FLYASH  C-618  C  HEADWATERS  2.80  104 LBS.

AGGREGATES  ASTM  MATERIAL  SIZE  SP/GRAV  S.S.D. WEIGHTS

FINE  C-33  SAND  Minus 3/8"  2.63  1339 LBS.
COARSE #1  C-33  GRAVEL  1.0"  2.54  1850 LBS.

MIXING WATER-----------------------------------------------POTABLE-----------------------------------------------250 LBS.

WATER REDUCING ADMIXTURES ASTM-494

SET  TEMP  BRAND  TYPE  MANUFACTURER  DOSAGE PER CY.
NORMAL  <85  MasterPolyheed 997  A / F  BASF  20.80 OZS.
RETARDER  >85  MasterSet R 300  D  BASF  20.80 OZS.
HRWR (Plant Added)  MasterGlenium 7500  F  BASF  Optional  41.60 OZS.

NOTE: Normal set water reducer dosages vary according to seasonal temperatures. Adjustments are based on the manufactures recommendations. Retarders and accelerators to adjust set times and HRWR will be used at the customers request and are priced separately.

AIR ENTRAINING ADMIXTURE  ASTM C-260

BRAND: MasterAir AE 90  MANUFACTURER: BASF  0.00 OZS.

MIX DESIGN AIR CONTENT  1.5 (+/- 1.5)%

W/C RATIO: 0.48  CEM. EQUIVALENCY: 5.53  SACKS  YIELD CU. FT. 27.00

1) STANDARD MATERIALS WILL HONOR STRENGTH INDICATED AT A MAXIMUM 4" (+/- 1.0) SLUMP.
2) ICE, WHEN USED FOR TEMPERATURE CONTROL, REPLACES MIXING WATER POUND FOR POUND AND IS PRICED SEPARATELY.
3) FOR FLY ASH DESIGNS, W/C (Water Cementitious) RATIO IS COMPUTED USING CEMENT+FLY ASH PER ACI 211.1
<table>
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<tr>
<th>Cast date</th>
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<th>Conc Temp</th>
<th>Air Temperature</th>
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4.500  5.10  72.0  65.0  3585.0  5805.0  Average
0.796  0.45  12.1  11.7  255.6  349.5  STD
2.75   4.1   53    47    2960   5335  Low
5.75   5.6   89    79    3740   6547  High

Number of observations: 15
See separate submittal reviewed by civil engineer.

601-001 Portland Cement Pavement
Product Data - Mix Design and Break Reports
MIX #: 023
MIX DESCRIPTION: 4000 PSI @ 28 Days
TYPE: Normal Weight

PROJECT: Henry Mayfield Elementary
CLASS: 4000 PSI @ 28 Days
ADDRESS: 31820 Hwy 190 West Flex @
LOCATION: Slidell, LA
APPLICATION: Paving Mix
PUMPABLE: Yes

CONTRACTOR: Frank A. Analone Gen. Contractor, Inc.

TO BE ORDERED BY CONTRACTOR

CEMENTITIOUS

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<tr>
<th>ASTM</th>
<th>TYPE</th>
<th>BRAND</th>
<th>SP/GRAV</th>
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<td>HEADWATERS</td>
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AGGREGATES

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MIXING WATER------------------------------------------------ POTABLE------------------------------------------------ 250 LBS.

SET

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</table>

NOTE: Normal set water reducer dosages vary according to seasonal temperatures. Adjustments are based on the manufacturers recommendations. Retarders and accelerators to adjust set times and HRWR will be used at the customers request and are priced separately.

AIR ENTRAINING ADMIXTURE

<table>
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<td>DOSAGE PER CY.</td>
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<td>MIX DESIGN AIR CONTENT</td>
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W/C RATIO: 0.48
CEM. EQUIVALENCY: 5.50 SACKS
YIELD CU. FT. 27.00

1) STANDARD MATERIALS WILL HONOR STRENGTH INDICATED AT A MAXIMUM 4” (+/- 1.0) SLUMP.

(CAUTION: INDIVIDUAL PROJECT SLUMP SPECS MAY BE MORE RESTRICTIVE)
2) ICE, WHEN USED FOR TEMPERATURE CONTROL, REPLACES MIXING WATER POUND FOR POUND AND IS PRICED SEPARATELY.
3) FOR FLY ASH DESIGNS, W/C (Water Cementitious) RATIO IS COMPUTED USING CEMENT+FLY ASH PER ACI 211.1
04810-001 Unit Masonry Assemblies
Section 2.9 - Mortar and Grout Mixes
Item D - Grout for Unit Masonry

Frank A. Anzalone, General Contractor, Inc.
JOB # ________ FILE 04810-001 DATE 5/30/16
REVIEWED BY X COMMENTS MADE X YES X NO
APPROVED FOR SUBMITTAL TO ARCHITECT X YES X NO

THIS SUBMITTAL HAS BEEN REVIEWED FOR GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS; VENDOR IS RESPONSIBLE FOR ACCURACY IN ACCORDANCE WITH ALL CONTRACT DOCUMENTS.
### MIX #:

119-VTP

### MIX DESCRIPTION:

C.M.U. Block Fill

### TYPE:

Normal Weight

### PROJECT:

Henry Mayfield Elementary

### CLASS:

2000 PSI @ 28 Days

### ADDRESS:

31820 Hwy 190 West

### LOCATION:

Slidell, LA

### PUMPABLE:

Yes

### APPLICATION:

C.M.U. Fill

### CONTRACTOR:

Frank A. Analone Gen. Contractor, Inc.

### ADDITIVES:

TO BE ORDERED BY CONTRACTOR

### CEMENTITIOUS

<table>
<thead>
<tr>
<th>ASTM</th>
<th>TYPE</th>
<th>BRAND</th>
<th>SP/GRAV</th>
<th>S.S.D. WEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-150</td>
<td>I/II</td>
<td>HOLCIM</td>
<td>3.15</td>
<td>400 LBS.</td>
</tr>
<tr>
<td>C-618</td>
<td>C</td>
<td>HEADWATERS</td>
<td>2.80</td>
<td>100 LBS.</td>
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</table>

### AGGREGATES

<table>
<thead>
<tr>
<th>ASTM</th>
<th>MATERIAL</th>
<th>SIZE</th>
<th>SP/GRAV</th>
<th>S.S.D. WEIGHTS</th>
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</thead>
<tbody>
<tr>
<td>C-33</td>
<td>SAND</td>
<td>Minus 3/8&quot;</td>
<td>2.63</td>
<td>1750 LBS.</td>
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<tr>
<td>C-33</td>
<td>PEA GRAVEL</td>
<td>3/8</td>
<td>2.54</td>
<td>1350 LBS.</td>
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</tbody>
</table>

### MIXING WATER

POTABLE

300 LBS.

### WATER REDUCING ADMIXTURES ASTM-494

<table>
<thead>
<tr>
<th>SET</th>
<th>TEMP</th>
<th>BRAND</th>
<th>TYPE</th>
<th>MANUFACTURER</th>
<th>DOSAGE PER CY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORMAL</td>
<td>&lt;85</td>
<td>MasterPolyheed 997</td>
<td>A / F</td>
<td>BASF</td>
<td>20.00 OZS.</td>
</tr>
<tr>
<td>RETARDER</td>
<td>&gt;85</td>
<td>MasterSet R 300</td>
<td>D</td>
<td>BASF</td>
<td>20.00 OZS.</td>
</tr>
</tbody>
</table>

**NOTE:** Normal set water reducer dosages vary according to seasonal temperatures. Adjustments are based on the manufactures recommendations. Retarders and accelerators to adjust set times and HRWR will be used at the customers request and are priced separately.

### AIR ENTRAINING ADMIXTURE ASTM C-260

<table>
<thead>
<tr>
<th>BRAND</th>
<th>MANUFACTURER</th>
<th>DOSAGE PER CY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MasterAir AE 90</td>
<td>BASF</td>
<td>0.00 OZS.</td>
</tr>
</tbody>
</table>

**MIX DESIGN AIR CONTENT**

1.5 %

### W/C RATIO

0.60

### CEM. EQUIVALENCY

5.32

### YIELD CU. FT.

27.00

1) STANDARD MATERIALS WILL HONOR STRENGTH INDICATED AT A MAXIMUM 11" SLUMP. (CAUTION: INDIVIDUAL PROJECT SLUMP SPECS MAY BE MORE RESTRICTIVE)

2) ICE, WHEN USED FOR TEMPERATURE CONTROL, REPLACES MIXING WATER POUND FOR POUND AND IS PRICED SEPARATELY.

3) FOR FLY ASH DESIGNS, W/C (Water Cementitious) RATIO IS COMPUTED USING CEMENT+FLY ASH PER ACI 211.1

Submitted By: _____________________________ Date: 04/05/16
**MasterAir® AE 90**

Air-Entraining Admixture

Formerly MB-AE 90*

---

**Description**

MasterAir AE 90 air-entraining admixture is for use in concrete mixtures. It meets the requirements of ASTM C 260, AASHTO M 154 and CRD-C 13.

**Applications**

Recommended for use in:
- Concrete exposed to cyclic freezing and thawing
- Production of high-quality normal or lightweight concrete (heavyweight concrete normally does not contain entrained air)

---

**Features**

- Ready-to-use in the proper concentration for rapid, accurate dispensing

**Benefits**

- Improved resistance to damage from cyclic freezing and thawing
- Improved resistance to scaling from deicing salts
- Improved plasticity and workability
- Reduced permeability – increased watertightness
- Reduced segregation and bleeding

**Performance Characteristics**

Concrete durability research has established that the best protection for concrete from the adverse effects of freezing and thawing cycles and deicing salts results from: proper air content in the hardened concrete, a suitable air-void system in terms of bubble size and spacing, and adequate concrete strength, assuming the use of sound aggregates and proper mixing, transporting, placing, consolidation, finishing and curing techniques. MasterAir AE 90 admixture can be used to obtain adequate freeze-thaw durability in a properly proportioned concrete mixture, if standard industry practices are followed.

**Air Content Determination:** The total air content of normal weight concrete should be measured in strict accordance with ASTM C 231, “Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method” or ASTM C 173/C 173M, “Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.” The air content of lightweight concrete should only be determined using the Volumetric Method. The air content should be verified by calculating the gravimetric air content in accordance with ASTM C 138/C 138M, “Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete.” If the total air content, as measured by the Pressure Method or Volumetric Method and as verified by the Gravimetric Method, deviates by more than 1.5%, the cause should be determined and corrected through equipment calibration or by whatever process is deemed necessary.
Guidelines for Use

Dosage: There is no standard dosage for MasterAir AE 90 admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete varies because of differences in concrete-making materials and ambient conditions. Typical factors that might influence the amount of air entrained include: temperature, cementitious materials, sand gradation, sand-aggregate ratio, mixture proportions, slump, means of conveying and placement, consolidation and finishing technique. The amount of MasterAir AE 90 admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mixture, use 0.25 to 4 fl oz/cwt (16-260 mL/100 kg) of cementitious material. Measure the air content of the trial mixture, and, if needed, either increase or decrease the quantity of MasterAir AE 90 admixture to obtain the desired air content.

In mixtures containing water-reducing or set-control admixtures, the amount of MasterAir AE 90 admixture needed may be somewhat less than the amount required in plain concrete.

Due to possible changes in the factors that can affect the dosage of MasterAir AE 90 admixture, frequent air content checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air required in the mixture at the point of placement.

If an unusually high or low dosage of MasterAir AE 90 admixture is required to obtain the desired air content, consult your local sales representative. In such cases, it may be necessary to determine that, in addition to a proper air content in the fresh concrete, a suitable air-void system is achieved in the hardened concrete.

Dispensing and Mixing: Add MasterAir AE 90 admixture to the concrete mixture using a dispenser designed for air-entraining admixtures, or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount.

For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate. If the concrete mixture contains fine lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

Precaution

In a 2005 publication from the Portland Cement Association (PCA R&D Serial No. 2789), it was reported that problematic air-void clustering that can potentially lead to above normal decreases in strength was found to coincide with late additions of water to air-entrained concretes. Late additions of water include the conventional practice of holding back water during batching for addition at the jobsite. Therefore, caution should be exercised with delayed additions of water to air-entrained concrete. Furthermore, an air content check should be performed after post-batching addition of any other materials to an air-entrained concrete mixture.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterAir AE 90 admixture will neither initiate nor promote corrosion of reinforcing and prestressing steel embedded in concrete, or of galvanized floor and roof systems. No calcium chloride or other chloride-based ingredients are used in the manufacture of this admixture.

Compatibility: MasterAir AE 90 admixture may be used in combination with any BASF admixture, unless stated otherwise on the data sheet for the other product. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

Storage and Handling

Storage Temperature: MasterAir AE 90 admixture should be stored and dispensed at 31 °F (-0.5 °C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If MasterAir AE 90 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

Shelf Life: MasterAir AE 90 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterAir AE 90 admixture has been exceeded.

Safety: Chemical goggles and gloves are recommended when transferring or handling this material.
Packaging
MasterAir AE 90 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents
Safety Data Sheets: MasterAir AE 90 admixture

Additional Information
For additional information on MasterAir AE 90 admixture, or its use in developing a concrete mixture with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF’s Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

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* MB-AE 90 became MasterAir AE 90 under the Master Builders Solutions brand, effective January 1, 2014.

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BASF Corporation
Admixture Systems
www.master-builders-solutions.basf.us

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Canada
1800 Clark Boulevard
Brampton, Ontario L6T 4M7
Tel: 800 387-5862 Fax: 905 792-0651

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MasterSet® R 300
Set Retarding Admixture
Formerly Pozzolith 300 R°

Description
MasterSet R 300 ready-to-use, liquid admixture is used for making more uniform and predictable high-performance concrete while retarding its setting time to facilitate placing and finishing operations.

It meets ASTM C 494/C 494M requirements for Type B, retarding, and Type D, water-reducing and retarding, admixtures.

Applications
Recommended for use in:
- Prestressed concrete
- Precast concrete
- Reinforced concrete
- Shotcrete
- Lightweight concrete
- Pumped concrete
- 4x4™ Concrete
- Pervious concrete
- Self-consolidating concrete (SCC)

Features
- Reduced water content required for a given workability
- Retarded setting characteristics
- Improved workability
- Reduced segregation
- Superior finishing characteristics for flatwork and cast surfaces
- Moderate to extended retardation – depending on the dosage rate
- Full-form deflection can take place (before concrete sets) in extended pours for bridge decks, cantilevers, nonshored structural elements, etc.

Benefits
- Flexibility in the scheduling of placing and finishing operations
- Offsets the effects of early hardening during extended delays between mixing and placing
- Helps eliminate cold joints
- Peak temperature and/or rate of temperature rise in mass concrete lowered thereby reducing thermal cracking
- Increased compressive and flexural strengths

Performance Characteristics
Concrete produced with MasterSet R 300 admixture will have rapid strength development after initial set occurs. It develops higher early (24-hour) and ultimate strengths than plain concrete when used within the recommended dosage range, under normal, comparable curing conditions.

When MasterSet R 300 admixture is used in heat-cured concrete, the length of the preheating period should be increased until initial set of the concrete is achieved. The actual heat-curing period is then reduced accordingly to maintain existing production cycles without sacrificing early or ultimate strengths.
**Rate of Hardening:** The temperature of the concrete mixture and the ambient temperature (forms, earth, reinforcement, air, etc.) affect the hardening rate of concrete. At higher temperatures, concrete hardens more rapidly which may cause problems with placing and finishing. MasterSet R 300 admixture retards the set of concrete. Within the normal dosage range, it will generally extend the working and setting times of concrete containing normal portland cement approximately 1 hour to 5 hours compared to that of a plain concrete mixture, depending on job materials and temperatures.

Trial mixtures should be made with job materials approximating job conditions to determine the dosage required.

**Guidelines for Use**

**Dosage:** MasterSet R 300 admixture is recommended for use at a dosage of 4 ± 1 fl oz/cwt (260 ± 65 mL/100 kg) of cementitious materials for most concrete mixtures using typical concrete ingredients. Because of variations in job conditions and concrete materials, dosages other than the recommended amounts may be required. In such cases, contact your local sales representative.

**Product Notes**

**Corrosivity – Non-Chloride, Non-Corrosive:** MasterSet R 300 admixture will neither initiate nor promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally-added calcium chloride or other chloride-based ingredients.

**Compatibility:** MasterSet R 300 admixture may be used in combination with any BASF admixture. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mix.

**Storage and Handling**

**Storage Temperature:** MasterSet R 300 admixture should be stored above freezing temperatures. If MasterSet R 300 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

**Shelf Life:** MasterSet R 300 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterSet R 300 admixture has been exceeded.

**Packaging**

MasterSet R 300 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

**Related Documents**

Safety Data Sheets: MasterSet R 300 admixture

**Additional Information**

For additional information on MasterSet R 300 admixture or its use in developing a concrete mixture with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF’s Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.
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MasterPolyheed® 997
Mid-Range Water-Reducing Admixture
Formerly PolyHeed 997*

Description
MasterPolyheed 997 admixture is a patented multi-component, mid-range water-reducing admixture. MasterPolyheed 997 admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

Applications
Recommended for use in:
- All concrete applications where superior workability, pumpability and finishability qualities are desired, in particular, flatwork, pumped concrete and pervious concrete
- Concrete containing manufactured sand and harsh concrete mixtures

Features
- True mid-range water reduction (5-15%) and excellent performance across a wide slump range, especially the difficult slump range of 5-8 in. (125-200 mm)
- Superior workability, pumpability and finishability qualities even in concrete mixtures containing low amounts of cementitious materials
- Superior finishing characteristics for residential/commercial flatwork and formed surfaces

Benefits
- Significantly reduced placement and finishing time resulting in lower in-place concrete costs
- Higher strength at all ages
- Enhanced concrete durability
- Increased service life of concrete structures

Performance Characteristics

<table>
<thead>
<tr>
<th>Mixture Data:</th>
<th>500 lb/yd³ (295 kg/m³) of Type I cement; slump 6-7 in. (150-180 mm); 5-6% air; concrete temperature 70 °F (21 °C); ambient temperature, 70 °F (21 °C).</th>
</tr>
</thead>
</table>

Setting Time Performance1

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Initial Set (h:min)</th>
<th>Difference (h:min)</th>
</tr>
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<tbody>
<tr>
<td>Reference</td>
<td>6:01</td>
<td>—</td>
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<tr>
<td>MasterPolyheed 997 admixture @</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 fl oz/cwt (325 mL/100 kg)</td>
<td>6:22</td>
<td>+0:21</td>
</tr>
<tr>
<td>10 fl oz/cwt (650 mL/100 kg)</td>
<td>6:57</td>
<td>+0:56</td>
</tr>
<tr>
<td>15 fl oz/cwt (980 mL/100 kg)</td>
<td>7:31</td>
<td>+1:30</td>
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Compressive Strength, psi (MPa)

<table>
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<tr>
<th>Mixture</th>
<th>7-Day</th>
<th>28-Day</th>
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</thead>
<tbody>
<tr>
<td>Plain</td>
<td>2360 (16.3)</td>
<td>3320 (22.9)</td>
</tr>
<tr>
<td>MasterPolyheed 997 admixture @</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 fl oz/cwt (325 mL/100 kg)</td>
<td>3060 (21.1)</td>
<td>3930 (27.1)</td>
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<tr>
<td>10 fl oz/cwt (650 mL/100 kg)</td>
<td>3740 (25.8)</td>
<td>4610 (31.8)</td>
</tr>
<tr>
<td>15 fl oz/cwt (980 mL/100 kg)</td>
<td>4620 (31.9)</td>
<td>5460 (37.7)</td>
</tr>
</tbody>
</table>

1Note: The data shown are based on controlled laboratory tests. Reasonable variations from the results shown here may be experienced as a result of differences in concrete making materials and jobsite conditions.

Guidelines for Use

Dosage: MasterPolyheed 997 admixture has a recommended dosage range of 3-15 fl oz./cwt (195-980 mL/100 kg) of cementitious material for most concrete mixes.

As the dosage of MasterPolyheed 997 admixture increases to 15 fl oz/cwt (980 mL/100 kg) of cementitious materials, normal concrete setting characteristics are maintained and early and ultimate compressive strengths increase.

BASF does not recommend the use of dosages outside the recommended range without trial testing. Consult your local sales representative for assistance in determining the dosage for optimum performance.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterPolyheed 997 admixture will neither initiate nor promote corrosion of reinforcing or prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. MasterPolyheed 997 admixture does not contain intentionally added calcium chloride or other chloride-based ingredients.

Compatibility: MasterPolyheed 997 admixture may be used in combination with any BASF admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the concrete mixture.

Storage and Handling

Storage Temperature: If MasterPolyheed 997 admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

Shelf Life: MasterPolyheed 997 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterPolyheed 997 admixture has been exceeded.

Packaging

MasterPolyheed 997 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterPolyheed 997 admixture

Additional Information

For additional information on MasterPolyheed 997 admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

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**MasterGlenium® 7500**  
**Full-Range Water-Reducing Admixture**  
Formerly GLENIUM 7500*

### Description
MasterGlenium 7500 full-range water-reducing admixture is very effective in producing concrete mixtures with different levels of workability including applications that require self-consolidating concrete (SCC). MasterGlenium 7500 admixture meets ASTM C 494/C 494M compliance requirements for Type A, water-reducing, and Type F, high-range water-reducing admixtures.

### Applications
Recommended for use in:
- Concrete with varying water reduction requirements (5-40%)
- Concrete where control of workability and setting time is critical
- Concrete where high flowability, increased stability, high-early and ultimate strengths, and improved durability are needed
- Producing self-consolidating concrete (SCC)
- Strength-on-demand concrete, such as 4x4™ Concrete
- Pervious concrete

### Features
MasterGlenium 7500 full-range water-reducing admixture is based on the next generation of polycarboxylate technology found in all of the MasterGlenium 7000 series products. This technology combines state-of-the-art molecular engineering with a precise understanding of regional cements to provide specific and exceptional value to all phases of the concrete construction process.
- Dosage flexibility for normal, mid-range and high-range applications
- Excellent early strength development
- Controls setting characteristics
- Optimizes slump retention/setting relationship
- Consistent air entrainment

### Benefits
- Faster turnover of forms due to accelerated early strength development
- Reduces finishing labor costs due to optimized set times
- Use in fast track construction
- Minimizes the need for slump adjustments at the jobsite
- Less jobsite QC support required
- Fewer rejected loads
- Optimizes concrete mixture costs

### Performance Characteristics
Concrete produced with MasterGlenium 7500 admixture achieves significantly higher early age strength than first generation polycarboxylate high-range water-reducing admixtures. MasterGlenium 7500 admixture also strikes the perfect balance between workability retention and setting characteristics in order to provide efficiency in placing and finishing concrete. The dosage flexibility of MasterGlenium 7500 allows it to be used as a normal, mid-range, and high-range water reducer.
Guidelines for Use

**Dosage:** MasterGlenium 7500 admixture has a recommended dosage range of 2-15 fl oz/cwt (130-975 mL/100 kg) of cementitious materials. For most mid- to high-range applications, dosages in the range of 5-8 fl oz/cwt (325-520 mL/100 kg) will provide excellent performance. For high performance and producing self-consolidating concrete mixtures, dosages of up to 12 fl oz/cwt (780 mL/100 kg) of cementitious materials can be utilized. Because of variations in concrete materials, jobsite conditions and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local sales representative.

**Mixing:** MasterGlenium 7500 admixture can be added with the initial batch water or as a delayed addition. However, optimum water reduction is generally obtained with a delayed addition.

Product Notes

**Corrosivity – Non-Chloride, Non-Corrosive:** MasterGlenium 7500 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressing steel or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterGlenium 7500 admixture.

**Compatibility:** MasterGlenium 7500 admixture is compatible with most admixtures used in the production of quality concrete, including normal, mid-range and high-range water-reducing admixtures, air-entrainers, accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

**Do not use** MasterGlenium 7500 admixture with admixtures containing beta-naphthalene sulfonate. Erratic behaviors in slump, workability retention and pumpability may be experienced.

Storage and Handling

**Storage Temperature:** MasterGlenium 7500 admixture must be stored at temperatures above 40 °F (5 °C). If MasterGlenium 7500 admixture freezes, thaw and reconstitute by mechanical agitation.

**Shelf Life:** MasterGlenium 7500 admixture has a minimum shelf life of 9 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterGlenium 7500 admixture has been exceeded.

Packaging

MasterGlenium 7500 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterGlenium 7500 admixture

Additional Information

For additional information on MasterGlenium 7500 admixture or on its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF’s Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.
Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF’s present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.
National Ready Mixed Concrete Association

Certificate of Conformance
For
Concrete Production Facilities

THIS IS TO CERTIFY THAT

Pearl River Plant, Pearl River, LA
Standard Materials, LLC

"Facility does not meet all requirements for furnishing concrete in subfreezing weather"

has been inspected by the undersigned licensed professional engineer for conformance with the requirements of the Check List for Ready Mixed Concrete Production Facilities. As of the inspection date, the facilities met the requirements for production by

Truck Mixing with Automatic Batching and Recordings of Cementitious Materials, Aggregate, Water, and Chemical Admixtures

Signature of Licensed Professional Engineer

July 15, 2015        September 22, 2017
Inspection Date        Certification Expiration Date

This company will maintain these facilities in compliance with the Check List requirements and will correct promptly any deficiencies which develop.

Signature of Company Official

Title of Company Official

NOTICE: The Check List indicates only that plant facilities are satisfactory for the production of concrete when properly operated. Conformance of the concrete itself with specification requirements must be verified by usual inspection methods in accordance with sales agreements.

This certificate is issued by the National Ready Mixed Concrete Association on verification that the production facility conforms to the requirements of the NRMCA Certification of Ready Mixed Concrete Production Facilities, QC3. Unauthorized reproduction or misuse of this certificate may result in legal action.

Plant ID #: 814590


Certification ID #: 18787

National Ready Mixed Concrete Association  900 Spring Street • Silver Spring • Maryland 20910