

Logged in 4/1/10  
Logged out 4/14/10 sw

**CRIFE ARCHITECTS + ENGINEERS**

Architects, Engineers & Surveyors 317-844-6777

PJT. NO. 090324-20000

SUBMIT NO. 321713

Parking Bumpers

APPROVED

Fabrication/installation may be undertaken. Approval does not authorize changes to the Contract Sum or Contract Time.

APPROVED AS

CORRECTED NOTED

RESUBMIT: Limit corrections to items marked.

REJECTED;  
REVISE &  
RESUBMIT

Fabrication and/or installation may NOT be undertaken.

Reviewed only for general conformance with project design concept and general compliance with the Contract Documents. Corrections or comments made in review do not relieve contractor from compliance with requirements of the contract documents. Approval; of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for: all dimensions; information pertaining to the fabrication process or to the means, methods, techniques, sequence and procedure of construction; coordination of work with other trades; and performing of work in safe and satisfactory manner.

Signed by: [Signature]

Consultant/Department: Crife Architects + Engineers

Date: 4/13/10



Architects + Engineers

**COMMENTS:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

#5 REBAR 1'6" long with 3/4" hole cut

to be provided as indicated on PV-25 attached

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

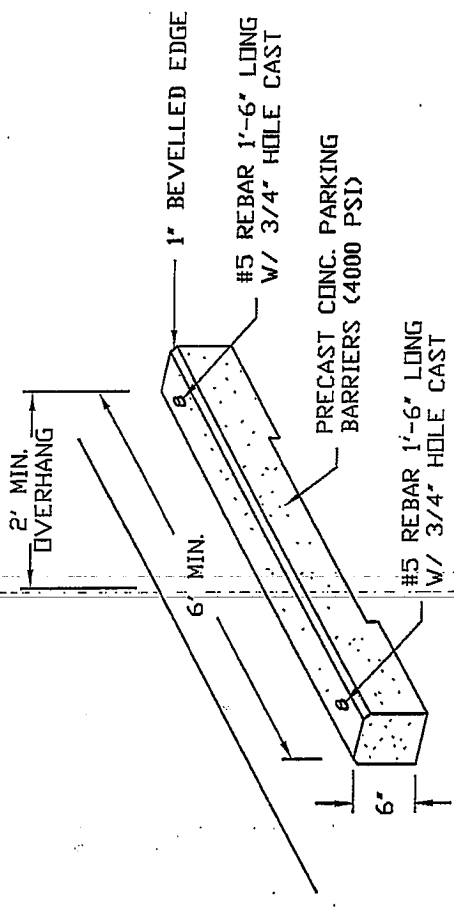
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**CONCRETE PARKING BUMPER**

PV-25

NO SCALE



**Submittal Item**

**Project** [IPS-III-1015] - 015 - Thomas D. Gregg Elementary School **View Date** 3/29/2010

Enginuity Management & Consulting Corp.  
Ste 230  
6214 Morenci Trail  
Indianapolis, IN 46268  
Phone: 317-297-5601  
Fax: 317-423-5460

**Submittal Item No.**  
00518

**General Information**

|                                |   |                           |                                      |
|--------------------------------|---|---------------------------|--------------------------------------|
| <b>Item No.</b>                | 00518   | <b>Revision</b>           | 1                                    |
| <b>Package No. Rev.</b>        | <u>321713.0</u>   |                           |                                      |
| <b>Description</b>             | Product Data  |                           |                                      |
| <b>CSI Code</b>                | 32 17 13 - Parking Bumpers                                | <b>Submitting Company</b> | MacDougall Pierce Construction, Inc. |
| <b>Reference No.</b>           |   | <b>Copies Required</b>    | 1                                    |
| <b>Status</b>                  | Requested from Prime <b>Item Type</b>                     |                           | Product Data                         |
| <b>Responsible Team Member</b> | Sahara Williams (Enginuity Management & Consulting Corp.) |                           |                                      |
| <b>Item Notes</b>              |   |                           |                                      |
| <b>Primary Response</b>        |   |                           |                                      |
| <b>Submission Notes</b>        |   |                           |                                      |
| <b>Review Notes</b>            |   |                           |                                      |

**Dates**

|                                       |                                    |
|---------------------------------------|------------------------------------|
| <b>Material Required on Site</b>      | <b>Required Lead Time (days)</b>   |
| <b>Approved Submittal Required By</b> | <b>Required Review Time (days)</b> |
| <b>Submission Due</b>                 |                                    |

**Manufacturer**

**Submittal**

**Job:** 20926  
IPS #15 (Thomas D. Gregg)  
2302 East Michigan Street  
Indianapolis, IN 46201

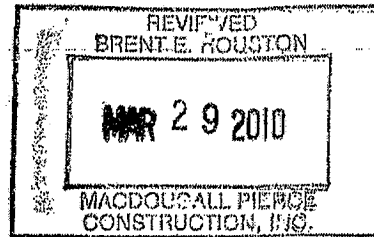
**Spec Section No:** 32 17 13  
**Submittal No:** 1  
**Revision No:** 1  
**Sent Date:** 3/29/2010

**Spec Section Title:** Parking Bumpers  
**Submittal Title:** Parking Bumper /Stop Concrete Mix Designs

**Contractor:**  
MacDougall Pierce Construction

Reviewed by WJB  
of Eniginuity for  
CQM Team on  
3/31/2010

Contractor's Stamp



Architect's Stamp

Engineer's Stamp



Otto's Parking Marking  
2449 East Main Street  
Greenwood, IN 46143

January 29, 2010

RE: Parking Bumper / Stop Concrete Mix Designs

| Description   | Parking Bumpers | 4000 psi, Air, Stone |
|---------------|-----------------|----------------------|
| Mix #         |                 | 710                  |
| Cement        | (lbs/cy)        | 385                  |
| Flyash        | (lbs/cy)        | 104                  |
| # 8 Stone     | (lbs/cy)        | 1830                 |
| #23 Sand      | (lbs/cy)        | 1415                 |
| Water         | (lbs/cy)        | 195                  |
| Water Reducer | (oz/cwt)        | 4                    |
| Water/Cement  |                 | 0.40                 |
| Slump         | (+/-1")         | 6"                   |
| Air Content   | (%)             | 5-8                  |

Applicable References:

ASTM C94 and ACI 301 – Structural & Ready Mix Concrete  
 ASTM C150 Cement: Buzzi Type III, Greencastle, IN  
 ASTM C618 Flyash: Class C, ISG/Headwaters, Wheatfield, IN  
 ASTM C33 #23 Sand: Martin Marietta – Carmel S&G  
 #8 Stone: Martin Marietta – 96<sup>th</sup> Street  
 ASTM C494 Water Reducer – Glenium 7500  
 ASTM C260 Air Entrainment Agent, Microair by BASF Master Builders

Respectfully Submitted,

Mike Shumaker  
Concrete Industries Inc.

10340 Pleasant Street · Suite 400  
 Noblesville, IN 46060  
 Office: 317-776-1828 · Fax: 317-773-6227  
 Dispatch Phone: 317-846-5841 · Fax: 317-574-9507



# BUZZI UNICEM USA

PO Box 482-Greencastle, IN 46135-(765) 853-9766

This is to certify that **Type III** meets ASTM C-150 Specifications for Portland Cement and CSA A3000.

| Chemical Data                                    |       | Physical Data                  |       |
|--|-------|--------------------------------|-------|
| ASTM C114  |       | ASTM C185                      |       |
| Silicon Dioxide (SiO <sub>2</sub> )              | 18.82 | Air Entrained (%)              | 8.3   |
| Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> ) | 5.08  | ASTM C204                      |       |
| Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> )   | 2.92  | Fineness (cm <sup>2</sup> /gm) | 6130  |
| Calcium Oxide (CaO)                              | 62.87 | ASTM C161                      |       |
| Magnesium Oxide (MgO)                            | 3.95  | Autoclave Expansion (%)        | 0.109 |
| Sulfur Trioxide (SO <sub>3</sub> )               | 4.01  | Compressive Strength, PSI      |       |
| Loss on Ignition                                 | 1.11  | ASTM C109 Mortar Cubes         |       |
| Sodium Oxide                                     | 0.38  | 1-Day                          | 4310  |
| Potassium Oxide                                  | 0.76  | 3-Day                          | 5290  |
| Insoluble Residue                                | 0.21  | 7-Day                          | 5910  |
| Total Alkali as Na <sub>2</sub> O                | 0.88  | 28-Day                         | 6460  |
| POTENTIAL COMPOUND COMPOSITION                   |       | ASTM C191                      |       |
| Tricalcium Silicate (C <sub>3</sub> S)           | 63    | Setting Time:                  |       |
| Dicalcium Silicate (C <sub>2</sub> S)            | 6     | Vicat                          |       |
| Tricalcium Aluminate (C <sub>3</sub> A)          | 9     | Initial, Min.                  | 82    |
| Tricalcium Aluminoferrite(C <sub>4</sub> AF)     | 9     | Final, Min.                    | 160   |

| Silo | Bill of Lading | Tons | Date | Silo | Bill of Lading | Tons | Date      |
|------|----------------|------|------|------|----------------|------|-----------|
|      |                |      |      | 701  |                |      | 1/20/2010 |

STATE OF INDIANA)  
COUNTY OF PUTNAM)

Before me the undersigned, a Notary Public for Putnam County, State of Indiana personally appeared John J. Wachal and acknowledged the execution of the foregoing instrument this 25th day of January 2010.

Attn: Concrete Ind  
Fax:

Phillip A. Clodfelter, Notary Public  
My commission expires May 8, 2015.

John J. Wachal  
Quality Manager

Analytical Testing Service Laboratories, Inc.

P.O. Box 1118, Joplin, Missouri 64802

(417) 782-6573

Headwaters Resources, Inc  
P.O. Box 3734  
Alpharetta, GA 30023  
1-770-475-8095

January 05, 2010

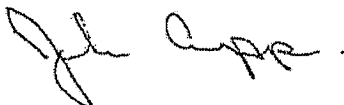
Attn: Carolyn Grant

Re: 9565 - Schahfer 15 Fly Ash Sample 2000 Ton Composite - 11/12-30/09

|   | ASTM C-618<br>Class "C"<br><u>Requirements</u> | <u>Actual</u> |
|---|--|---------------|
| Fineness (+325 Mesh)                          | 34% Max  | 10.20%        |
| Moisture Content                              | 3% Max   | 0.15%         |
| Specific Gravity                              | ****   | 2.59          |
| Specific Gravity Variation                    | 5% Max   | 1.93%         |
| Loss on Ignition                              | 6% Max   | 0.30%         |
| Soundness                                     | 0.8% Max                                       | 0.01%         |
| S.A.I., 7 Days                                | 75% Min  | 99.60%        |
| S.A.I., 28 Days                               | 75% Min  | 103.00%       |
| Water Req. % Control                          | 105% Max                                       | 93.40%        |
| Silica SiO <sub>2</sub>                       | ****   | 37.71%        |
| Aluminum Oxide Al <sub>2</sub> O <sub>3</sub> | ****   | 21.30%        |
| Ferric Oxide Fe <sub>2</sub> O <sub>3</sub>   | ****   | 6.15%         |
| Total   | 50% Min  | 65.16%        |
| Sulfur Trioxide SO <sub>3</sub>               | 5% Max   | 1.66%         |
| Calcium Oxide CaO                             | ****   | 24.17%        |
| Magnesium Oxide MgO                           | ****   | 4.81%         |
| Available Alkalies as Na <sub>2</sub> O       | ****   | 1.26%         |

We certify the above was tested in accordance with ASTM C-618 and AASHTO M295

Analytical Testing Service Laboratories, Inc.



John K. Cupp, Manager

Indiana District Quality Control Laboratory  
 4700 East 96<sup>th</sup> Street  
 Indianapolis, IN 46240  
 Phone: 317-846-5942 Ext. 102  
 Fax: 317-846-4061



**Product Submittal**

**To:** Mike Shumaker **From:** Scott Woodard

---

**Phone:** **Pages:** 1

---

**Fax:** mshumaker@ciireadymix.com **Date:** 1/29/2010

---

**Re:** North Indy and Carmel Monthly Report **CC:**

---

• **Comments:** Following is the current Average Gradation, Specific Gravity, and Absorption information for North Indy and Carmel Sand. Please feel free to contact me with any questions. Thank you.

| Coarse     | 8 cs  | 8 gr  | Pea Gravel | Fine | 23 ns |
|------------|-------|-------|------------|------|-------|
| 1-1/2"     |       |       |            | 3/8" | 100.0 |
| 1"         | 100.0 | 100.0 |            | #4   | 99.6  |
| 3/4"       | 89.1  | 89.2  |            | #8   | 94.1  |
| 1/2"       | 47.8  | 54.3  | 100.0      | #16  | 74.4  |
| 3/8"       | 25.1  | 30.1  | 99.8       | #30  | 49.6  |
| #4         | 6.5   | 6.6   | 52.2       | #50  | 14.8  |
| #8         | 1.8   | 2.5   | 6.0        | #100 | 1.9   |
|            |       |       | 2.4        | #200 | 0.9   |
| Decant     | 0.8   | 1.0   | 1.3        |      | 0.6   |
| Bulk Dry   | 2.657 | 2.608 | 2.638      |      | 2.618 |
| SSD        | 2.691 | 2.651 | 2.698      |      | 2.661 |
| Apparent   | 2.752 | 2.726 | 2.806      |      | 2.734 |
| Absorption | 1.29  | 1.73  | 2.25       |      | 2.65  |
| FM         |       |       |            |      | 2.76  |





The Chemical Company

January 29, 2010

Concrete Industries Inc  
10340 Pleasant Street Suite 400  
Noblesville, Indiana 46060

**Attention:** Mike Shumaker  
**Project:** various  
**Project location:** various

Certificate of Conformance  
Micro-Air®  
BASF Construction Chemicals, LLC\* Air-Entraining Admixture for Concrete

(\*Previously doing business as BASF Admixtures, Inc. and prior to that as Degussa Admixtures, Inc. and Master Builders, Inc.)

I, Richard Hubbard, Sr. Technical Marketing Specialist for BASF Construction Chemicals, LLC, Cleveland, Ohio, certify:

That Micro-Air is a BASF Construction Chemicals, LLC Air-Entraining Admixture for concrete; and

That no calcium chloride or chloride based ingredient is used in the manufacture of Micro-Air; and

That Micro-Air, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.0001 percent (1.0 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That Micro-Air meets the requirements of ASTM C 260, Corps of Engineers CRD-C 13 and AASHTO M154, the Standard Specifications for Air-Entraining Admixtures for Concrete.

Richard Hubbard  
Sr. Technical Marketing Specialist BASF Construction Chemicals, LLC

BASF Construction Chemicals, LLC  
23700 Chagrin Boulevard  
Cleveland, OH 44122  
216 839-7500 ph  
www.masterbuilders.com

**Master  
Builders**  
Admixture Solutions



The Chemical Company

January 29, 2010

Concrete Industries Inc.  
10340 Pleasant Street, Suit 400  
Noblesville, Indiana 46060

Attention: Mike Shumaker  
Project: various  
Project location: various

Certificate of Conformance  
GLENIUM® 7500  
BASF Construction Chemicals, LLC\* Admixture for Concrete

(\*Previously doing business as BASF Admixtures, Inc. and prior to that as Degussa Admixtures, Inc. and Master Builders, Inc.)

I, Richard Hubbard, Sr. Technical Marketing Specialist for BASF Construction Chemicals, LLC, Cleveland, Ohio, certify:

That GLENIUM 7500 is a high-range water-reducing admixture manufactured by BASF Construction Chemicals, LLC; and

That no calcium chloride or chloride based ingredient is used in the manufacture of GLENIUM 7500; and

That GLENIUM 7500, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00017 percent (1.7 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That GLENIUM 7500 meets the requirements for a Type A, Water-Reducing and Type F, Water-Reducing, High Range Admixture specified in ASTM C 494, Corps of Engineers' CRD-C 87 and AASHTO M194, the Standard Specifications for Chemical Admixtures for Concrete.

Richard Hubbard  
Sr. Technical Marketing Specialist BASF Construction Chemicals, LLC

BASF Construction Chemicals, LLC  
23700 Chagrin Boulevard  
Cleveland, OH 44122  
216 839-7500 ph  
www.masterbuilders.com

**Master  
Builders**  
Admixture Solutions



The Chemical Company

|        |          |  |
|--------|----------|--|
| 3<br>4 | 02 70 00 | Product Data<br>Gas in Place Concrete<br>Precast Concrete<br>Mass Concrete<br>Massive Grouting |
|        | 08 70 00 |  |
|        | 03 70 00 |  |
|        | 02 05 16 |  |
|        | 02 05 16 |  |

### Description

GLENIUM® 7500 full-range water-reducing admixture is based on the next generation of polycarboxylate technology found in all of the GLENIUM 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.

GLENIUM 7500 admixture is very effective in producing concrete mixtures with different levels of workability including applications that require self-consolidating concrete (SCC). The use of GLENIUM 7500 admixture results in faster setting characteristics as well as improved early age compressive strength. GLENIUM 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
- Production of Rheodynamic® Self-Consolidating Concrete (SCC) mixtures
- 4x4™ Concrete for fast-track construction
- Pervious Concrete mixtures

## GLENIUM® 7500

### Full-Range Water-Reducing Admixture

#### Features

- 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 GLENIUM 7500 admixture achieves significantly higher early age strength than first generation polycarboxylate high-range water-reducing admixtures. GLENIUM 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 GLENIUM 7500 allows it to be used as a normal, mid-range, and high-range water reducer.

#### Guidelines for Use

**Dosage:** GLENIUM 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 Rheodynamic 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 BASF Construction Chemicals representative.

**Mixing:** GLENIUM 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.

Master  
Builders

## Product Data: GLENIUM® 7500

### Product Notes

**Corrosivity – Non-Chloride, Non-Corrosive:** GLENIUM 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 GLENIUM 7500 admixture.

**Compatibility:** GLENIUM 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 GLENIUM 7500 admixture with admixtures containing beta-naphthalene sulfonate. Erratic behaviors in slump, workability retention and pumpability may be experienced.**

### Storage and Handling

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

**Shelf Life:** GLENIUM 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 GLENIUM 7500 admixture has been exceeded.

### Packaging

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

### Related Documents

Material Safety Data Sheets: GLENIUM 7500 admixture.

### Additional Information

For additional information on GLENIUM 7500 admixture or on its use in developing concrete mixtures with special performance characteristics, contact your BASF Construction Chemicals representative.

*The Admixture Systems business of BASF Construction Chemicals is a leading provider of innovative admixtures for specialty concrete used in the ready mix, precast, manufactured concrete products, underground construction and paving markets throughout the North American region. The Company's respected Master Builders brand products are used to improve the placing, pumping, finishing, appearance and performance characteristics of concrete.*

**LIMITED WARRANTY NOTICE.** We warrant our products to be of good quality and will replace or, at our discretion, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, BASF MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and BASF shall have no other liability with respect thereto. Any claims regarding product defect must be received in writing within one (1) year from the date of shipment. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the BASF Technical Manager.

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. BASF SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. BASF reserves the right to make any changes according to technological progress or further developments.

For Professional use only. Not for sale to or use by the general public.

BASF Construction Chemicals  
Admixture Systems

[www.masterbuilders.com](http://www.masterbuilders.com)

United States 23700 Chagrin Boulevard, Cleveland, Ohio 44122-5544 ☎ Tel: 800 628-9990 ☎ Fax: 216 839-8821  
Canada 1800 Clark Boulevard, Brampton, Ontario L8T 4M7 ☎ Tel: 800 387-5862 ☎ Fax: 905 782-0651

© Construction Research & Technology GMBH

© BASF Construction Chemicals, 2009. Printed in USA. 12/09. LIT. # 2000025



**Master  
Builders**