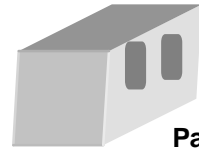




# BLOCK PROGRAM LABORATORY REPORT



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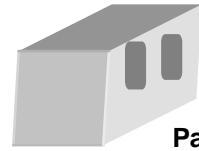
**ATTACHMENTS**

Product Data literature for all products evaluated

Material Safety Data Sheets for all products evaluated



# BLOCK PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

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**FOR:** Bob Whisnant - Chief Operating Officer/ Owner  
cc: Jack James  
Paul Tessier

**SUBJECT:** Southwest Concrete Products  
RT2 Box 152F  
Alleyton, Texas 78935

**DATE:** November 30, 2000

**PROJECT:** 0009-14 BP

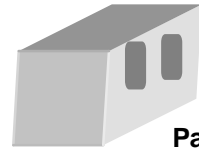
**SAMPLES SUBMITTED:**

| <u>Block</u>                 | <u>Color</u> | <u>Size</u>   |
|------------------------------|--------------|---------------|
| 2 Heavyweight Burnished CMUs | White        | 8" x 8" x 16" |

**Submitted by :** Paul Tessier



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## PURPOSE OF TESTING:

Two white, burnished, concrete blocks were submitted for testing using PROSOCO's new construction cleaning and water repellent products.

**A. Cleaning Custom Masonry Units:** Sure Klean<sup>®</sup> New Construction Cleaners were evaluated for removal of laboratory applied mortar.

To simulate new construction soiling, the ability of each cleaner to remove hardened deposits of Type S mortar was evaluated and is reported below. Mortar was applied by placing the CMUs face down in a smooth-finished tray of prepared mortar for 10 minutes. The mortar-stained CMUs were cured at 75% ± 5% relative humidity and 70°F ± 5°F before any cleaning tests were attempted. Soiled CMUs were allowed to dry before cleaning.

Heavy deposits of mortar are removed with dry scraping after 24 hours. Prepared cleaning solutions are then evaluated for their effectiveness in removing residual Type S mortar staining after 3 days, 7 days, and 14 days of curing.

**B. Surface Alteration Testing** - Sure Klean<sup>®</sup> Custom Masonry Cleaner (1:4 dilution) and Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner (1:3 dilution) were tested to determine if a cleaning program implemented to remove excess mortar and related new construction soiling would otherwise alter the appearance of cleaned surfaces. Surface Alteration was evaluated visually based upon perceived discoloration or erosion/etching of the masonry unit.

Aggregate Exposure is the visual examination of the CMU comparing aggregate exposure of the untreated control surface to surfaces cleaned with selected product(s) at given dilutions.

Surface Pigment Alteration/Removal is the visual examination of the CMU comparing the surface pigmentation of the untreated control to surfaces cleaned with selected product(s) at given dilutions.

Matrix Erosion is the visual examination comparing the untreated control surface to surfaces cleaned with selected products at given dilutions looking for any potential erosion/digestion of the cementitious matrix of the CMU.

Staining is the visual examination for changes that are the result of a chemical reaction that leaves a staining precipitate.

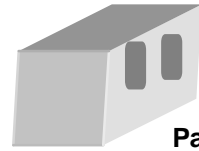
The following is the scale used for reporting results of all categories:

- 0 – no change
- 1 – 1-24% change – slight
- 2 – 25-49% change – moderate
- 3 – 50-74% change – heavy
- 4 – 75-100% change – excessive

**C. Surface Alteration of Applied Protective Treatments** - Sure Klean<sup>®</sup> Custom Masonry Sealer and Stand Off<sup>®</sup> Gloss N' Guard were applied in concentrate to the surface of the CMUs to determine if a treatment would alter the appearance of the block. Surface Alteration was evaluated visually based upon any perceived discoloration or change of the masonry unit surface.



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PROSOCO, Inc.

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## CLEANING PRODUCTS EVALUATED

| Cleaner                          | Dilution |
|----------------------------------|----------|
| Custom Masonry Cleaner           | 1:4      |
| Burnished Custom Masonry Cleaner | 1:3      |

## SURFACE ALTERATION TESTING PRODUCTS EVALUATED

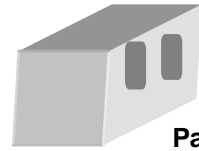
| Cleaner                          | Dilution |
|----------------------------------|----------|
| Custom Masonry Cleaner           | 1:4      |
| Burnished Custom Masonry Cleaner | 1:3      |

## PROTECTIVE TREATMENTS EVALUATED

| Treatment             | Dilution    |
|-----------------------|-------------|
| Custom Masonry Sealer | Concentrate |
| Gloss N' Guard        | Concentrate |



# BLOCK PROGRAM LABORATORY REPORT



PROSOCO, Inc.

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## SECTION A – CLEANING CMUs

### DESCRIPTION OF PRODUCTS EVALUATED

These cleaning trials were conducted to determine the optimal cleaning/dwell time combination.

**Sure Klean® Custom Masonry Cleaner** – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-6 parts water. Apply by brush or low-pressure spray.

**Sure Klean® Burnished Custom Masonry Cleaner** – A general purpose, non-etching concentrated acidic cleaner for most custom masonry and colored concrete. Removes rust, mud, oil, atmospheric dirt, mortar smears leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-3 parts water. Apply by brush or low-pressure spray.

### TEST METHOD – Cleaning

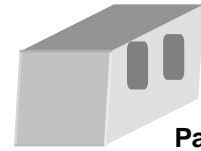
Dilution ratios refer to mixtures of parts concentrated cleaner : parts fresh water. Chemical cleaners were evaluated on CMUs treated with Stand Off® Gloss N' Guard, Sure Klean® Custom Masonry Sealer and an untreated control using the following procedure:

1. Prewet the surface with water.
2. Apply each cleaner at the appropriate dilutions.
3. Allow 3-5 minute exposure time.
4. Reapply the products and moderately agitate with a brush.
5. Pressure rinse thoroughly. \*
6. Allow the surface to dry for at least 18 hours and visually examine.

\* Pressure rinsing was conducted at approximately 800 psi with a warm water flow rate of 1.9 gallons per minute.



# BLOCK PROGRAM LABORATORY REPORT



## Test Results - Cleaning

### Untreated Control

| Cleaner                          | Dilution | Mortar Cure Time | Effectiveness |
|----------------------------------|----------|------------------|---------------|
| Custom Masonry Cleaner           | 1:4      | 3 day            | 100%          |
|                                  |          | 7 day            | 100%          |
|                                  |          | 14 day           | 100%          |
| Burnished Custom Masonry Cleaner | 1:3      | 3 day            | 100%          |
|                                  |          | 7 day            | 100%          |
|                                  |          | 14 day           | 100%          |

### Stand Off® Gloss N' Guard

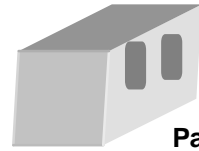
| Cleaner                          | Dilution | Mortar Cure Time | Effectiveness |
|----------------------------------|----------|------------------|---------------|
| Custom Masonry Cleaner           | 1:4      | 3 day            | 100%          |
|                                  |          | 7 day            | 100%          |
|                                  |          | 14 day           | 100%          |
| Burnished Custom Masonry Cleaner | 1:3      | 3 day            | 100%          |
|                                  |          | 7 day            | 100%          |
|                                  |          | 14 day           | 100%          |

### Sure Klean® Custom Masonry Cleaner

| Cleaner                          | Dilution | Mortar Cure Time | Effectiveness |
|----------------------------------|----------|------------------|---------------|
| Custom Masonry Cleaner           | 1:4      | 3 day            | 100%          |
|                                  |          | 7 day            | 100%          |
|                                  |          | 14 day           | 100%          |
| Burnished Custom Masonry Cleaner | 1:3      | 3 day            | 100%          |
|                                  |          | 7 day            | 100%          |
|                                  |          | 14 day           | 100%          |



# BLOCK PROGRAM LABORATORY REPORT



**PROSOCO, Inc.**

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## **CONCLUSIONS - Cleaning:**

Based on the test data, the submitted white, burnished CMU samples were efficiently cleaned with both a 1:3 dilution of Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner and a 1:4 dilution of Sure Klean<sup>®</sup> Custom Masonry Cleaner. Use higher concentrations and surface agitation to maximize aggregate exposure. Use low concentration and surface agitation to minimize aggregate exposure.

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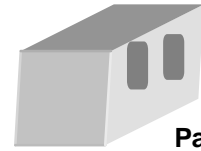
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## **RECOMMENDED PRODUCTS AND DILUTIONS - CLEANING:**

Based on these evaluations, both Sure Klean<sup>®</sup> Custom Masonry Cleaner and Sure Klean<sup>®</sup> Burnished Custom Masonry Cleaner can be recommended for job site testing. They are both effective in removing excess mortar. The most appropriate cleaner and dilution should be determined on the specific job-site, and will be dependent primarily on the nature and severity of soiling present at that location.



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PROSOCO, Inc.

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## **SECTION B – Surface Alteration Testing:**

### **DESCRIPTION OF PRODUCTS EVALUATED – Surface Alteration:**

**Sure Klean® Custom Masonry Cleaner** – A general purpose, concentrated acidic cleaner for most custom masonry and colored concrete. Removes concrete splashes, excess mortar, mud, heavy efflorescence and surface soiling, leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-6 parts water. Apply by brush or low-pressure spray.

**Sure Klean® Burnished Custom Masonry Cleaner** – A general purpose, non-etching concentrated acidic cleaner for most custom masonry and colored concrete. Removes rust, mud, oil, atmospheric dirt, mortar smears leaving the masonry clean and uniform with no acid burning or streaking. Liquid concentrate for dilution with 2-3 parts water. Apply by brush or low-pressure spray.

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### **TEST METHOD – Surface Alteration Testing:**

Dilution ratios refer to mixtures of concentrated cleaner : fresh water.

Sure Klean® Custom Masonry Cleaner was evaluated at a dilution of 1:3 and Sure Klean® Burnished Custom Masonry Cleaner 1:4. Testing was run on CMUs that had been treated with Stand Off® Gloss N' Guard, Sure Klean® Custom Masonry Sealer and an untreated control. The following procedure was used:

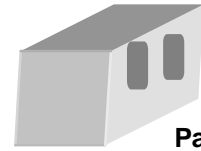
1. Prewet the surface with water.
2. Apply each cleaner at the appropriate dilutions.
3. Allow 3-5 minute exposure time.
4. Reapply the products and moderately agitate with a brush.
5. Pressure rinse thoroughly.\*
6. Allow the surface to dry for at least 18 hours and visually examine.

\* Pressure rinsing was conducted at approximately 800 psi with a warm water flow rate of 1.9 gallons per minute.





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**Surface Alteration Testing Results:**

**Untreated Control**

| <b>Substrate:</b> Burnished CMU  |          | <b>Pigment Color:</b> White |                                     |                |          |
|----------------------------------|----------|-----------------------------|-------------------------------------|----------------|----------|
| Product                          | Dilution | Aggregate Exposure          | Surface Pigment Alteration/ Removal | Matrix Erosion | Staining |
| Custom Masonry Cleaner           | 1:4      | 0                           | 1                                   | 0              | 0        |
| Burnished Custom Masonry Cleaner | 1:3      | 0                           | 1                                   | 0              | 0        |

**Stand Off® Gloss N' Guard Treated**

| <b>Substrate:</b> Burnished CMU  |          | <b>Pigment Color:</b> White |                                     |                |          |
|----------------------------------|----------|-----------------------------|-------------------------------------|----------------|----------|
| Product                          | Dilution | Aggregate Exposure          | Surface Pigment Alteration/ Removal | Matrix Erosion | Staining |
| Custom Masonry Cleaner           | 1:4      | 0                           | 0                                   | 0              | 0        |
| Burnished Custom Masonry Cleaner | 1:3      | 0                           | 0                                   | 0              | 0        |

**Sure Klean® Custom Masonry Sealer Treated**

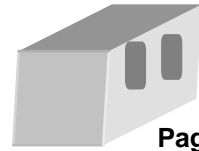
| <b>Substrate:</b> Burnished CMU  |          | <b>Pigment Color:</b> White |                                     |                |          |
|----------------------------------|----------|-----------------------------|-------------------------------------|----------------|----------|
| Product                          | Dilution | Aggregate Exposure          | Surface Pigment Alteration/ Removal | Matrix Erosion | Staining |
| Custom Masonry Cleaner           | 1:4      | 0                           | 1                                   | 0              | 0        |
| Burnished Custom Masonry Cleaner | 1:3      | 0                           | 1                                   | 0              | 0        |

Scale used for reporting results of all categories

- |                              |                                |
|------------------------------|--------------------------------|
| 0 – no change                | 3 – 50-74% change – heavy      |
| 1 – 1-24% change – slight    | 4 – 75-100% change – excessive |
| 2 – 25-49% change – moderate |                                |



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**PROSOCO, Inc.**

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## **CONCLUSIONS - SURFACE ALTERATION:**

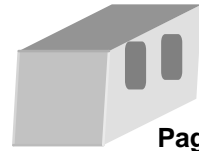
Based on the test data, no surface alterations were apparent on the submitted white, burnished CMU samples cleaned with either a 1:3 dilution of Sure Klean® Burnished Custom Masonry Cleaner or a 1:4 dilution of Sure Klean® Custom Masonry Cleaner. A very minimal loss of surface pigment was noticed on the Sure Klean® Custom Masonry Sealer treated block and on the untreated control. No etching or discoloration was noticed on the treated or untreated submitted samples.

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## **RECOMMENDED PRODUCTS AND DILUTIONS - SURFACE ALTERATION:**

Based on these evaluations, either Sure Klean® Custom Masonry Cleaner or Sure Klean® Burnished Custom Masonry Cleaner are recommended for job site testing. Minimal effects were noticed after the mortar cleaning on the treated and untreated samples of the white, burnished CMUs. See product literature for additional application and product information. Coverage rates and application procedures should be confirmed by field test applications.



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## **SECTION C – Surface Alteration of Applied Protective Treatments:**

### **DESCRIPTION OF PRODUCTS EVALUATED – Surface Alteration of Applied Protective Treatments:**

**Sure Klean® Custom Masonry Sealer** – A clear solvent based silicone elastomer formulated to weatherproof custom masonry units, cast stone, architectural concrete block, precast concrete, wood and porous masonry without altering the natural appearance. Apply concentrate in a wet-on-wet application.

**Stand Off® Gloss N' Guard** – A highly-durable, VOC-compliant, protective coating for tile, pavers, terrazzo and other polished and unpolished masonry. Dries to a high-gloss finish, which enhances the natural beauty of treated surfaces. Apply a thin, even coat.

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### **TEST METHOD – Surface Alteration of Applied Protective Treatment - Custom Masonry Sealer:**

Sure Klean® Custom Masonry Sealer was evaluated in concentrate. The following procedure was used:

1. CMUs were soaked in water for 1 hour to simulate the wet-grind process.
2. CMUs were placed in an oven at 300°F for 30 seconds to simulate the drying process.
3. CMUs were allowed to stand for 30 seconds to simulate time between exposure to the dryer and the chemical treatments.

#### **Spray Application Instructions**

1. Apply a single saturating application of Stand Off® Custom Masonry Sealer with a low-pressure sprayer.
2. Allow treated surfaces to dry thoroughly before polishing or burnishing.

**Note:** When applying to a burnished, ground face or similar smooth surfaces, use care to avoid over application.

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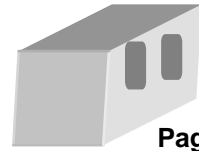
### **TEST METHOD – Surface Alteration of Applied Protective Treatment - Gloss N' Guard:**

Stand Off® Gloss N' Guard was evaluated in concentrate. The following procedure was used:

1. CMUs were soaked in water for 1 hour to simulate the wet-grind process.
2. CMUs were placed in an oven at 300°F for 30 seconds to simulate the drying process.
3. CMUs were allowed to stand for 30 seconds to simulate time between exposure to the dryer and the chemical treatments.
4. Apply a thin even coat of Stand Off® Gloss N' Guard with a low-pressure sprayer.
5. Allow treated surfaces to dry thoroughly before polishing or burnishing.



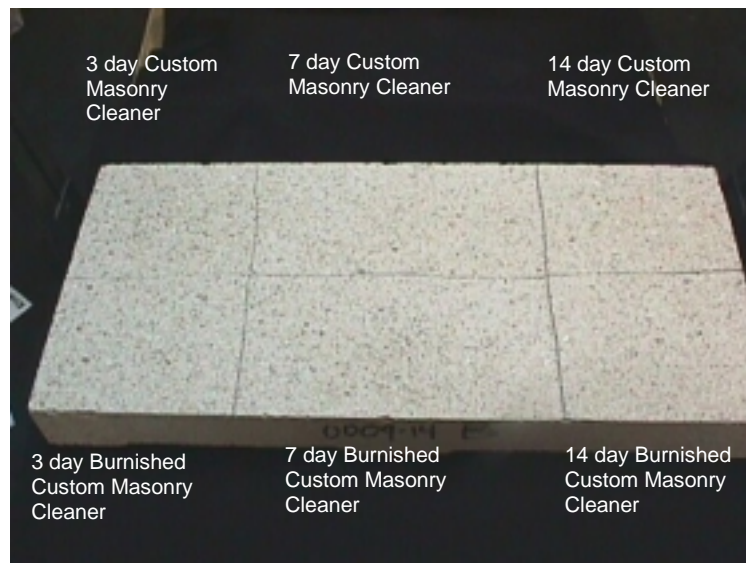
# BLOCK PROGRAM LABORATORY REPORT



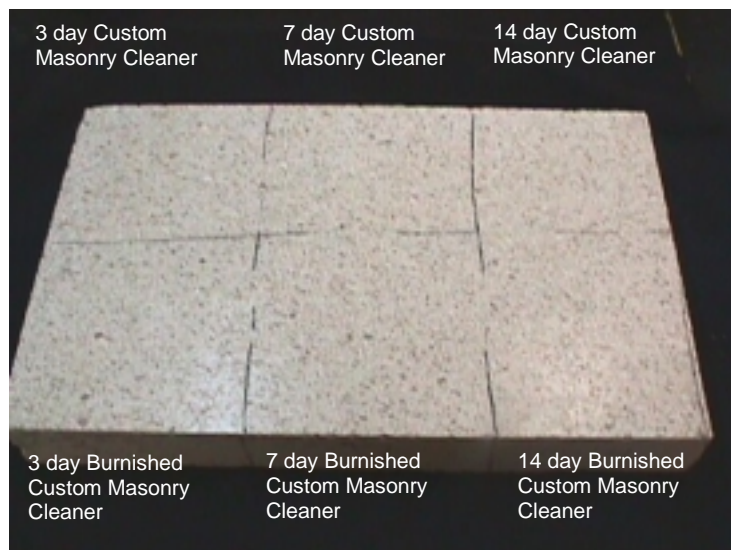
**Surface Alteration of Applied Protective Treatment Results:**

| Treatment             | Surface Alterations      |
|-----------------------|--------------------------|
| Gloss N' Guard        | Slight gloss enhancement |
| Custom Masonry Sealer | No change                |

**Type "S" mortar cleaning on Untreated Control**

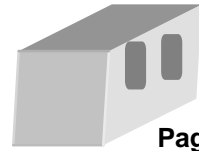


**Type "S" mortar cleaning Stand Off<sup>®</sup> Gloss N' Guard**

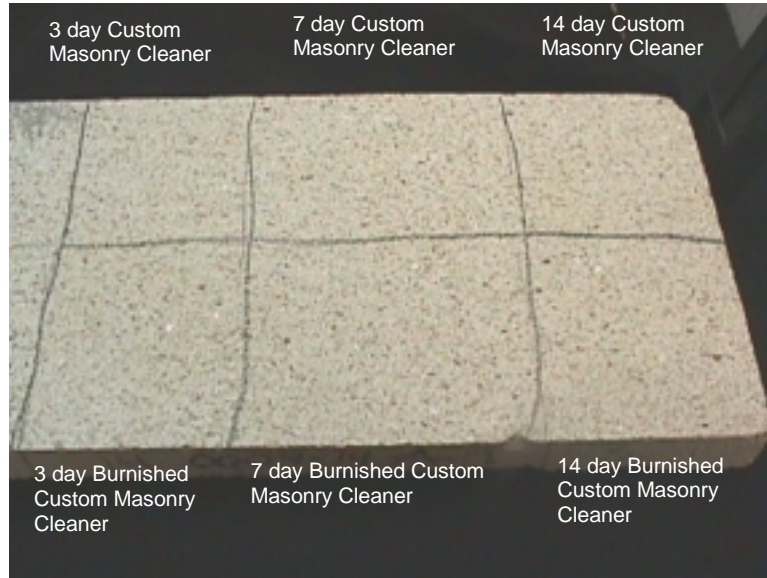




# BLOCK PROGRAM LABORATORY REPORT



## Type "S" Mortar cleaning on Sure Klean® Custom Masonry Sealer



### CONCLUSIONS – SURFACE ALTERATION OF APPLIED PROTECTIVE TREATMENTS:

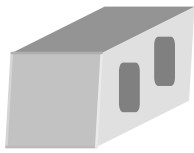
Based on the test data, no surface alteration was apparent on the submitted white, burnished CMU samples treated with Stand Off® Gloss N' Guard and Sure Klean® Custom Masonry Sealer. A slight gloss enhancement was noticed on CMUs treated with Stand Off® Gloss N' Guard. No changes were noticed on samples treated with Sure Klean® Custom Masonry Sealer. It should be noted that treatments were set up to simulate in plant conditions but these conditions are job-site specific and cannot be predictably replicated in a laboratory environment. Thorough job-site evaluations are necessary.

### RECOMMENDED PRODUCTS AND DILUTIONS – SURFACE ALTERATION OF APPLIED PROTECTIVE TREATMENTS:

Based on these evaluations, Stand Off® Gloss N' Guard or Stand Off® Custom Masonry Sealer can be recommended for job site testing. See product literature for additional application and product information. Apply all products in accordance with the manufacturer's recommendations provided on container labels and product data sheets. Coverage rates and application procedures should be confirmed by field test applications.

Christopher L. Ramsey  
Technical Services Analyst

CLR/csm



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**Laboratory Report**

**Block Program Evaluation**

**Southwest Concrete Products  
Alleyton, TX**

**Project No. 0009-14 BP**

***Prepared For:***

**Bob Wisnant**

**Southwest Concrete Products  
RT 2 Box 152F  
Alleyton, TX 78935**

***Prepared By:***



***PROSOCO, Inc.  
November 2000***