all products made using naturally occurring mined materials, attractive and characteristic ranges exist which enhance and add interest to the appearance of walls.

With exterior use, the initial wall surface is enhanced by weathering, which brings out the natural beauty of the composite silica dioxide surface. The silica dioxide material is an extremely hard, abrasion resistant mineral carefully selected for SPECTRA-GLAZE® glazings and mined from deposits formed millions of years ago by the ice age. This is integral in the face.

Inquire for detailed results of South Florida exposure and BRC Tests for UV. For most colors, change has been found to be minimal when rated in accordance with ASTM standards for glazed concrete block.

Color Fastness: The product has built-in light fastness and color change has been found to be minimal in South Florida field testing and in laboratory accelerated testing. It is also highly impervious to acid rain.

As with most materials, proper use, design and detailing are prerequisites. All colors show some slight change under continuous exterior exposure. As with other exterior material, some gradual and uniform weathering is expected. Consult the local manufacturing plant or sales office for recommendations and performance data.

Color Range: Standard and Designer Colors are available ranging across the spectrum, including pastels, related deep tones, creams, white, heather and neutrals. VARI-TONE® Series earthen finishes provide both a surprisingly similar appearance and economical and attractive alternative to natural materials such as granite, stone, marble, etc. Double-glazed units may be furnished with each face a different color. Other colors can be matched upon request.

Texture and Scale: SPECTRA-GLAZE® II Design Series and Scored Series units offer a wide selection of texture, scale and pattern. Design Series includes various rectilinear and curvilinear face designs in standard sizes. Scored Series provides the choice of reduced scale and pattern with economy of large 8 x 16 block, e.g., 8 x 8 score (DA1), 5 x 8 score (DA5), 4 x 8 score (DA2), and brick score (DA3). Other scores may be furnished on request. Score shall be 1/4" deep, but consult local manufacturing plant for precise specification.

Finish: At the time of delivery the product shall be free from chips, cracks, and pinholes in the finished wall when viewed at a distance of 5’, at right angles to the wall. Manufacturer's patching compound may be used by the contractor or seller to correct minor job site damage or imperfections.

Integral Bond: The finished facing is manufactured as a permanent part of the block. The molded finish penetrates deep into the pores of the block and is heat treated for durability. It becomes an integral part of the unit that cannot be removed without destroying the concrete itself.

Grade: SPECTRA-GLAZE® II pre-faced concrete masonry units are not graded. Units furnished to the project must meet Licensor's manufacturing tolerances and quality control standards, subject to sale terms and warranty terms of supplying licensed manufacture.

Intended Use: Standard construction detailing including dry construction, moisture and water protection, water stops, weep holes, elastic and durable mortar, flexible caulking of horizontal joints, metal or precast concrete caps, flexible control joints and drainage overhangs are a prerequisite of good design and proper use. Exterior walls must be pointed with S-G Sup'r Grout™, Hydroment grout or equivalent. Durable exterior wing walls require weep holes and S-G Joint Seal™ epoxy mortar thru-the-wall or equivalent, with horizontal joints and return edges raked and pointed with flexible exterior grade urethane or other durable caulk. Waterproof flashing should be used under all capping. The preferred system is to cap off exterior walls with waterproof flashing covered by precast slabs, metal capping or stone caps. This approach provides good structural design since it minimizes the number of horizontal cap joints that will be exposed to freeze thaw and stress from wall movement. Vertical expansion should also be used.

4. TECHNICAL DATA

SPECTRA-GLAZE® units are manufactured to meet and exceed published specifications for glazed masonry. The outstanding performance is documented by periodic testing from leading independent laboratories such as Froehling & Robertson (F&R), Materials Eng. & Testing, Pennington & Brown (P&B), Southwest Research Institute, U. S. Testing, Radiation Technology, South Fla. Testing, Underwriters Labs of Can., Warrington Research Ctr., BRC
Scan Testing and other laboratories. Copies of all test reports are available upon request. The following results represent performance characteristics that are outlined by ASTM specifications or are developed by The Burns & Russell Company to provide test data of other unique qualities of this glazed surface that may be desirable in different design applications. Special testing can be obtained if the circumstance dictates.

**Applicable Standards and Approvals:** SPECTRA-GLAZE® II units meet the requirements of the following standards and approvals:
- ASTM C 90 Hollow Load-Bearing Concrete Masonry Units, Type 1
- ASTM C 744 Pre-faced Concrete and Calcium Silicate Masonry Units
- Federal Specifications SS-C-621 b, Form B, Concrete Masonry Units, Hollow (and solid, pre-faced and unglazed) with Interim Amendment 2
- ASTM C 67, with respect to Freezing and Thawing
- USDA Approval
- Public Health Service Approval. Sanitary walls in compliance with Grade “A” Pasteurized Milk Ordinance. Public Health Service Pub. No. 229
  - Post Office Approval
  - Prison Approvals
  - DOD Approval

**TEST RESULTS**

This specification requires all equals or substitutes to meet or exceed the following performance results and to provide reliable authenticated test documentation.

**Resistance to Abrasion:** Specimens of SPECTRA-GLAZE® II coatings, 4" square and 1/8" in thickness tested for resistance to abrasion using Taber Abraser equipped with CS-17 calibrate wheels with 1,000 gram loading, for 500 wear cycles.

ASTM C 744 and Fed. Spec. SS-C-621 b, Form B

RESULTS: TABER WEAR FACTOR—43.3

**Chemical Resistance:** Coatings were subjected to the following chemicals according to the specification procedure and for the indicated period of exposure.

ASTM C 744 4.2 and Fed. Spec. SS-C-621 b, Form B

**RESULTS:** HIGHLY RESISTANT, NO EFFECT.

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>HOURS</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Hydroxide</td>
<td>12</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Acetic Acid, 5%</td>
<td>24</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Citric Acid, 20%</td>
<td>24</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Tannic Acid, 4%</td>
<td>24</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Potassium Hydroxide, 10%</td>
<td>3</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Trisodium Phosphate</td>
<td>5%</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>3%</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Chlorine Bleach</td>
<td>1%</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Household Detergent</td>
<td>24</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Vegetable Oil</td>
<td>24</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Blue-Black Ink (Waterman)</td>
<td>1</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Tincture of Iodine</td>
<td>2%</td>
<td>NO EFFECT</td>
</tr>
<tr>
<td>Ethyl Alcohol, SDA 3A</td>
<td>95%</td>
<td>NO EFFECT</td>
</tr>
</tbody>
</table>

**Resistance to Crazing:** Testing in accordance with ASTM C 426.

RESULTS: NO EVIDENCE OF CRAZING, CRACKING OR SPALLING.

**Facing Adhesion Test:** Uncapped specimen was placed between steel bearing plates, the upper plate having a spherical bearing head. Pre-faceted unit was placed with longest dimension in horizontal plane, and cores vertical. Unit was subjected to compression load unit failure.

ASTM C 744 4.3, Fed. Spec. SS-C-621 b, Form B

RESULTS: NO FAILURE OF ADHESION of the facing material to the concrete surfaces.

**Water Absorption:** Weighed specimens of SPECTRA-GLAZE® II coating immersed in distilled water at 70° F for three (3) consecutive 8-hour periods. Specimens were dried superficially with towel to remove surface moisture only, and weighed after each 8-hour exposure to determine rate of absorption.

ASTM C 948 and C 497 M 7 and Fed. Spec. SS-C-621 b, Form B

RESULTS: ANY INCREASE IN WEIGHT DUE TO ABSORPTION OF WATER AFTER 24 HOURS IMMERSION WAS TOO SMALL TO BE MEASURABLE.

**Fire Ratings:** Tested in accordance with ASTM Standards for concrete masonry,Fire ratings are a measure of resistance to heat transmission, flash-over and spread of fire from one building compartment to another.

RESULTS: EXCELLENT FIRE RATINGS of 1, 2, 3, 4 hours. Adding insulation in the cores of blocks can further increase these ratings.

**Surface Burning Characteristics:** Tested in accordance with ASTM E 84 and ASTM C 744 4.5 and Fed. Spec. SS-C-621 b, Form B

RESULTS: MEETS OR EXCEEDS ASTM AND FED. REQUIREMENTS. Flame spread less than 25, smoke contribution 0, smoke density less than 50.

**Resistance to Weathering:** Coated specimens, 3" x 6" exposed to 500 hours of accelerated weathering consisting of cycles of 102 minutes of ultraviolet radiation followed by 18 minutes of radiation plus water spray.

ASTM C 744 4.5 and Fed. Spec. SS-C-621 b, Form B

RESULTS: On comparing tested specimens of most colors with duplicate untested specimens, test specimens were given ASTM RATING OF NO CHANGE IN COLOR, GLOSS OR TEXTURE. (See intended use and color fastness paragraph under product description).

**Cleansability and Resistance to Soiling:** Stain consisting of 0.5 gram of oil soluble range dye (C1 solvent orange 7, C1. 12140), 1.0 gram of lanolin, and 5.0 grams of S.A.E. 10 lubricating oil, area of coating approximately 1/2" in diameter for period of 4 days. Test specimen then cleaned by placing in Gardner M-105-A washability machine, using industrial grade “Lestoil” as cleansing agent. After 80 cycles the surface was examined.

ASTM C 744 4.7 and Fed. Spec. SS-C-621 b, Form B

RESULTS: STAIN REMOVED in accordance with applicable standards for pre-faced concrete masonry speciﬁcations.

Each of the following staining media was applied to test specimens:
- Lead pencil #2; black crayon; magic marker (Speedy Products, Inc.);
- lanolin and carbon paper (Fed. Spec. TT-P-29). Specimens were cleaned, using Gardner M-105-A washability machine, with “Lestoil” commercial grade, and paint thinner (Magic Marker stain).

ASTM C 744 and Fed. Spec. SS-C-621 b, Form B
RESULTS:

<table>
<thead>
<tr>
<th>STAIN</th>
<th>CYCLES</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead Pencil</td>
<td>10</td>
<td>REMOVED</td>
</tr>
<tr>
<td>Black Crayon</td>
<td>60</td>
<td>REMOVED</td>
</tr>
<tr>
<td>Magic Maker</td>
<td>150</td>
<td>REMOVED</td>
</tr>
<tr>
<td>Lanolin &amp; Carbon Paper</td>
<td>60</td>
<td>REMOVED</td>
</tr>
</tbody>
</table>

Acid Rain: Simulated 20 year exposure to the severe New York City environment. MET (Glazed surface exposed to 70% sulphuric/30% nitric acids).

Test method developed by Materials Engineering & Testing (MET).

RESULTS: NO SIGNIFICANT DETERIORATION of color or other facing characteristics.

Gamma Radiation Resistance:
Test method developed by Radiation Technology (RT).

RESULTS: NO CHANGE WHEN EXPOSED TO NORMAL DOSES. Slight darkening in accident conditions. Radiation Technology Inc. tests.

Freeze/Thaw Durability: Testing in accordance with ASTM C 67 78.8.

RESULTS: NO SEPARATION, SPALLING, CRACKING OR DISINTEGRATION OF FACING.

ASTM C 67 78.8.

Light Reflectance Values: Tested using standard light reflectance equipment.

RESULTS: Light reflectance values for all standard SPECTRA-GLAZE® block colors are available from your local manufacturer or The Burns & Russell Co.

DIMENSIONS

The durable SPECTRA-GLAZE® surface material has precision edges with a gentle safety taper at the edge creating a smooth flat or sculptured wall surface between mortar joints depending on the face style selected.

Face Dimension Tolerance: ± 1/16”

Bed-Depth Tolerances:

Single face units 3/4”, 5/8”, 7/4”, 11/16”, ± 1/8”

Two face units 37/64”, 57/64”, 77/64” ± 1/4”

Distortion Tolerance: ± 1/16”.

ASTM C 744

5. INSTALLATION

Preparatory Work: Prior to the placing of units on the project, a properly protected sample panel at least 4’ x 4’ should be erected at the job site for each color selected, and include all block types and sizes to be used in that color to show approved appearance, color and range.

SPECTRA-GLAZE® masonry units are manufactured using patented technology that ensures consistent dimensional integrity within tolerances defined by ASTM C 744 for the glazed surface and ASTM C 90 for the concrete masonry units.

As measured from the points described on the attached schematic, (Figure 1) the glazed surface has a maximum allowable variation of 1/16” documented by Paragraphs 5.1 and 5.2 of ASTM C 744. The concrete masonry unit is manufactured to be within the dimensional tolerance of 1/8” defined in Paragraph 6.1 of ASTM C 90.

Method:

a) SPECTRA-GLAZE® masonry units will be delivered to job site paleditized. Units shall be stored as near as possible to their final position in the wall. SPECTRA-GLAZE® masonry units are to be stored on level ground and are to be provided with a tarpaulin or similar, as protection from the weather. Do not double stack pallets of SPECTRA-GLAZE® units. Claims for chipped or damaged block will not be allowed if stacking of pallets has occurred. Each unit is protected by layer separators to prevent damage in transit and on the job site. This cover and any individual cardboard covers are to be retained until the block is to be placed in the wall. Blocks are to be handled carefully. At minimum, follow job handling and protection specified in Fed. Spec. SS-C-621 b, Form B for construction site procedures.

b) Prior to beginning installation, all units should be inspected for conformance to manufacturer’s specifications. Damaged or non-conforming units must not be installed and shall be available for inspection by manufacturer. Replace any units damaged by contractor at contractor’s expense. All damaged units not reported as damaged upon inspection at time of delivery are presumed to have been damaged by contractor or improper job site handling. Contractor, at his expense, shall remove any scratches caused by mishandling using S-G Kleen ‘n’ Shine™ or other repair material. Any defective units installed are the responsibility of the contractor.

c) SPECTRA-GLAZE® units are to be installed using the glazed surface as the guide and allowing for 1/4” apparent mortar joint per attached schematic. (Figure 1). If installed following the schematic diagram, the lip of the unit is hidden by the mortar joint. The lip of a SPECTRA-GLAZE® unit does not define the face thickness, but is a function of the manufacturing process. It is essential, in order to maintain the quality of the finished wall, that all faces are laid even. Wherever possible, dry positioning should be employed by the contractor in order to satisfy himself that the required tolerances remain.

d) Where SPECTRA-GLAZE® units are specified to be scored it is recommended that when stack bond appearance is selected, use stack bond construction. All structural joints should be raked back at least 1/4” and allowed to set. Tuckpoint raked joints and scored joints at the same time. Other scores may be customized to your design.

e) For corner conditions use the People Friendly™ Corners (F-Series). Soft corners, standard bullnose or square corners. Factory-cut miter may be used for irregular returns.

f) Where SPECTRA-GLAZE® units are to be cut to fit on the job site, a power-driven masonry saw, i.e. Clipper saw, is to be used. Units should not be cut by hand.

g) SPECTRA-GLAZE® block joints can be tooled or can be raked and pointed with a specified mortar material. All exterior joints must be filled and struck to protect the wall from the elements. Raked joints or bare scores should not be used on the exterior.

h) For adequate water control, use large weep vents at least 4” long in vertical joint for every second block in exterior base and foundation— as with normal good construction design and installation to prevent water penetration. Also, use immediately above all flashing, bond beam, solid filled or other water stop locations in

Figure 1.
the wall. Continuous metal capping, stone, or precast slab plus the highest quality flashing and adequate overhangs are required to cap off an exterior SPECTRA-GLAZE® masonry wall. Metal capping should have at least a 4" overhang. Mortar used in capping should be impervious to water penetration and freeze/thaw. All exterior joints must be full and struck, never left raked. All laying mortar should contain appropriate water-repelling additives to insure water-proof mortar joints and good adhesion. Exposed mortar joints are raked back 1/4" and tuckpointed with epoxy mortar or other similar water-proof joint systems.

Sample panels should be erected to reflect exterior specifications prior to authorizing final construction.

i) For maximum exterior shine, mortar and color enhancement, apply S-G Kleen 'n Shine in accordance with supplier's instructions.

j) As work progresses, all units should be cleaned to remove excess mortar, mortar lumps and other materials with clean rags. Prevent mortar from hardening on the face by promptly cleaning wall sections as they are installed. Use soft, clean rag with masonry detergent such as the SPECTRA line of masonry cleaners, Vanitrol, SureClean 600, or Deox in accordance with the manufacturer's instructions. Do not use acid, steel wool, or other abrasives. Rinse well and wipe dry.

Building Codes: SPECTRA-GLAZE® II pre-faced concrete masonry units are acceptable in all national building codes where concrete masonry units are accepted.

Jurisdiction: SPECTRA-GLAZE® II pre-faced concrete masonry units are installed by masons.

6. AVAILABILITY AND COST

Availability: Representatives located throughout the United States, Canada, and overseas make SPECTRA-GLAZE® II units locally available in many areas. Flexible production schedules and quick truck deliveries often minimize job delays caused by add orders, plan changes or forgotten shapes. Consult nearest representative or manufacturer for units available and lead times required.

Cost: SPECTRA-GLAZE® blocks are reasonably priced compared to alternative wall systems. See our Relative Wall Cost Folder. Installed costs will vary by type of units, color, pattern, texture, types of construction,
9. TECHNICAL SERVICES
Sales representatives are available to consult with the Design Team regarding selection, detailing, availability and cost for specific project requirements. For the name of your nearest sales representative call or write, The Burns & Russell Company, (410) 837-0720, or Sweet’s BuyLine, or your local producer.

10. FILING SYSTEMS
- SPEC-DATA® II
- Sweet’s General Building and Renovation File
- Sweet’s National BuyLine Service
- Producer’s Council Guide to Quality Construction Products
- Buildcore
- RIBA Product Selector
- Construction Canada

WORLD-WIDE AVAILABILITY
SPECTRA-GLAZE® masonry unit wall systems are locally available in most areas throughout the United States, Canada and Europe. Flexible production schedules and quick job-site deliveries greatly reduce job delays encountered because of add orders, plan changes or forgotten shapes.

SPECTRA-GLAZE® wall unit MANUFACTURING PLANTS are located in Maryland, Michigan, Minnesota, Pennsylvania, Utah, Eastern and Western Canada. Distributors and sales offices in most major cities.

For information regarding the plant or sales office in your area please contact:
The Burns & Russell Co., 4230 Boston St., Box 6063, Baltimore, MD 21231. 410/837-0720. 800/638-3188. FAX 410-837-9498. Cataloged in SWEET’S 04200/BUR.

Factory-Glazed Concrete Masonry Units