SECTION 03 05 40

CONCRETE PIGMENTS

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\*\* NOTE TO SPECIFIER \*\* Solomon Colors; admixtures and colorants.  
This section is based on the products of Solomon Colors, which is located at:  
4050 Color Plant Rd.  
Springfield, IL 62702-1060  
Toll Free Tel: 800-624-0261  
Tel: 217-522-3112  
Fax: 800-624-3147  
Email: [request info (sgs@solomoncolors.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Solomon+Colors&coid=35596&rep=&fax=800-624-3147&message=RE:%20Spec%20Question%20(03055sol):%20%20&mf=)  
Web: <http://www.brickform.com> | <https://www.day1finishingaid.com>   
 [ [Click Here](https://www.arcat.com/arcatcos/cos35/arc35596.html) ] for additional information.  
As a global leader, Solomon Colors has provided service and quality to our customers for over seven decades while remaining family-owned and employee-owned. Innovation and solutions go hand in hand at Solomon Colors, with research and development as our core focus, beginning with our start grinding iron ore for the building industry in the early 20th century, to our patented formulas for mortar and concrete pigments. When our customers needed a better way to dispense pigments, we created our ColorSelect systems for dry and liquid color. From equipment, to color, to training - every improvement we make is about meeting our customers' needs to help you do your business better.  
You can depend on Solomon Colors: our color, our quality and our service every time.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* This section covers Solomon Colors SGS Integral Colors for Ready Mix Concrete, SGS Color-Flo Liquid Colors. Coordinate this section with the section specifying the concrete. Consult Solomon Colors for assistance in editing this section for the specific application. Delete items below not required for project.

* + 1. Dry powder iron oxide pigments to be added to concrete.
    2. Liquid iron oxide pigments to be added to concrete.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 03 37 13 - Shotcrete.
    3. Section 03 41 16 - Precast Concrete Slabs.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM C 33 - Standard Specification for Concrete Aggregates.
    2. ASTM C 94 - Standard Specification for Ready-Mixed Concrete.
    3. ASTM C 150 - Standard Specification for Portland Cement.
    4. ASTM C 979 - Standard Specification for Pigments for Integrally Colored Concrete.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete samples if colors have already been selected.

* + 1. Samples: Submit manufacturer's samples of standard concrete colors mixed with cement specified in Section 03 30 00 - Cast-in-Place Concrete.
    2. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
    3. Warranty: Submit manufacturer's standard warranty.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
        1. Sufficient plant facilities to provide quality and quantity of materials as required without delaying progress of the Work.
        2. Minimum of 10 years' experience in producing iron oxide pigments to be added to concrete.
     2. Installer Qualifications: Minimum 2 year experience installing similar products.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Construct mock-ups of concrete with pigments for approval of color by Architect.
       2. Construct mock-ups as specified in Section 03 30 00 - Cast-in-Place Concrete.
       3. Approved mock-ups shall become the standard for color, appearance and workmanship.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two sentences.

* + - 1. Mock-ups shall remain as part of the completed Work.
      2. Mock-ups shall not remain as part of the completed Work. At Architect's direction, demolish mock-ups and remove debris.
  1. PRE-INSTALLATION MEETINGS
     1. Convene minimum two weeks prior to starting work of this section.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Delivery: Deliver materials in manufacturer's original unopened containers, with labels clearly identifying product name, manufacturer, color name and number, weight, and mixing instructions.
     2. Storage:
        1. Store materials in clean, dry area in accordance with manufacturer's instructions.
        2. Keep containers sealed until ready for use.

\*\* NOTE TO SPECIFIER \*\* Use the following paragraph when specifying SGS Color-Flo Liquid Colors. Delete if not required.

* + - 1. Liquid Pigments:
         1. Keep from freezing.
         2. Keep container lids on.
         3. Reseal partial containers.
    1. Handling:
       1. Handle materials in accordance with manufacturer's instructions.
       2. Protect materials during handling and mixing to prevent damage or contamination.
  1. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  2. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Solomon Colors, which is located at: 4050 Color Plant Rd.; Springfield, IL 62702-1060; Toll Free Tel: 800-624-0261; Tel: 217-522-3112; Fax: 800-624-3147; Email: [request info (sgs@solomoncolors.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Solomon+Colors&coid=35596&rep=&fax=800-624-3147&message=RE:%20Spec%20Question%20(03055sol):%20%20&mf=); Web: <http://www.brickform.com> | <https://www.day1finishingaid.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. CONCRETE PIGMENTS

\*\* NOTE TO SPECIFIER \*\* Specify the required materials and delete the others.

* + 1. Dry Powder Iron Oxide Pigments: SGS Integral Colors for Ready Mix Concrete.

\*\* NOTE TO SPECIFIER \*\* Specify the color name and number. Consult Solomon Colors for availability of custom colors.

* + - 1. Color:
         1. Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
         2. Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
      2. Compliance: ASTM C 979.
      3. Material: Natural and synthetic, milled, blended iron oxide in dry powder form.
      4. Produce uniform and consistent color.
      5. Permanent, inert, stable to atmospheric conditions, sunfast, weather resistant, alkali resistant, water insoluble, lime proof, and non-bleeding.
      6. Free of deleterious fillers and extenders.
      7. Free of admixtures.
      8. Particle Size: 95 to 99 percent minus 325 mesh.
    1. Liquid Iron Oxide Pigments: SGS Color-Flo Liquid Colors.

\*\* NOTE TO SPECIFIER \*\* Specify the color name and number. Consult Solomon Colors for availability of custom colors.

* + - 1. Color:
         1. Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
         2. Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
      2. Compliance: ASTM C 979.
      3. Material: Pre-dispersed iron oxide pigments containing high pigment solids in aqueous base liquid.
      4. 4Produce uniform and consistent color.
      5. Permanent, inert, stable to atmospheric conditions, sunfast, weather resistant, alkali resistant, water insoluble, lime proof, and nonbleeding.
      6. Free of deleterious fillers and extenders.
      7. Particle Size: 95 to 99 percent minus 325 mesh.
      8. Specific Gravity: 1.9 to 2.0.
  1. CONCRETE MATERlALS
     1. Materials:
        1. Ready-Mixed Concrete: ASTM C 94.
        2. Portland Cement: ASTM C 150. Use same source, brand, type, and color throughout project.
        3. Coarse and Fine Aggregates: ASTM C 33. Use same source and color throughout project.
        4. Admixtures: Designed for use with concrete pigments. Do not use calcium chloride or admixtures containing chlorides. Use same admixtures throughout project.

\*\* NOTE TO SPECIFIER \*\* Coordinate the following paragraph with the section specifying the concrete.

* + 1. Concrete Mix Design: As specified in Section 03 30 00 - Cast-in-Place Concrete, except as specified in this section.
       1. Color Pigment Weight: Maximum 10 percent of cement weight.
       2. Water to Cement Ratio: Maximum 0.50.
       3. Use same concrete mix design throughout project.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. APPLICATION - DRY POWDER AND LIQUID IRON OXIDE PIGMENTS

\*\* NOTE TO SPECIFIER \*\* Coordinate the following two paragraphs with the section specifying the concrete.

* + 1. Measuring, Batching, Mixing, and Delivering Concrete: As specified in Section 03 30 00 - Cast-in-Place Concrete.except as specified in this section.
       1. Measure, batch, mix, and deliver concrete with pigments in accordance with manufacturer's instructions.
       2. Ensure mixer is clean and free of washout water before loading.
       3. Load mixer to a minimum of 40 percent capacity.
       4. Do not load mixer beyond recommended capacity.
       5. Add concrete materials to mixer in same order for each batch.
       6. Do not add pigment to mixer as first concrete material.
       7. Maintain consistent amounts of batch water in each batch.
    2. Placing, Finishing, and Curing Concrete: As specified in Section 03 30 00 - Cast-in-Place Concrete, except as specified in this section.
       1. Place, finish, and cure concrete with pigments in accordance with manufacturer's instructions.
       2. Allow excess surface water to evaporate before finishing.
       3. Do not over-finish surface. Avoid burning surface.
       4. Do not fog with water or cover surface of colored concrete during initial curing process for a minimum of 48 hours.

\*\* NOTE TO SPECIFIER \*\* Use the following three sentences when specifying liquid iron oxide pigments. Delete if not required.

* + 1. Add liquid pigments to concrete batch automatically by use of metering, volumetric, or weight measuring system or manually by weight or volume in accordance with manufacturer's instructions.
    2. Recycle liquid pigments while in their container before use to ensure uniformity and proper viscosity.
    3. Add liquid pigments to concrete batch after pre-wetted aggregate and before cement addition.
  1. CLEANING
     1. Clean concrete of efflorescence in accordance with manufacturer's instructions.
     2. Ensure concrete has sufficiently cured before cleaning.
     3. Use concrete cleaner approved by pigment manufacturer and Architect. Do not use cleaners containing acid.
     4. Apply cleaner in accordance with cleaner manufacturer's instructions.
  2. PROTECTION
     1. Protect installed products until completion of project.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION