

1. Product Name

PRECISION-PAC Integral Colors

2. Manufacturer

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3. Product Description

BASIC USE

PRECISION-PAC Integral Colors are pure concentrated pigments (both natural and synthetic) that contains no fillers, contaminants or admixtures that will affect the characteristics or performance of the concrete mix design. Because of their extremely small particle size, they have high tinting strength and are lightfast, lime-proof and water resistant. PRECISION-PAC Integral Colors are specifically designed to use in all cementitious materials. Basic applications include ready-mixed concrete, roof tiles, stucco, concrete brick, concrete pavers, concrete blocks, precast concrete products, plaster, grouts and many other similar applications.

COMPOSITION & MATERIALS

PRECISION-PAC Integral Colors are finely milled and are composed of pure oxide pigments of either synthetic or natural origins. These materials are carefully blended under strict compliance with the APC quality control department. They are matched to a standard, a sample is then obtained for retention, and a batch number is assigned. The batch number is printed on each bag produced.

SIZES

PRECISION-PAC Integral Colors are packaged in proprietary "PRECISION-PAC" disintegrating bags that can be added directly into a concrete mixing truck. They are also available in 50lb paper bags and 2000lb super-sacs.



APC Talladega Tan in Stamped Concrete

COLORS

PRECISION-PAC Integral Colors are available in 28 standard colors shown on APC's color chart. With APC's extensive laboratory capabilities, virtually any custom color can be obtained.

LIMITATIONS

PRECISION-PAC Integral Colors should not be used with any admixture that contains calcium chloride as calcium chloride can cause non-uniform color.



APC Nutmeg in Driveway

To eliminate loss of strength in the concrete, a dosage rate of 10% should not exceed the total weight of the cement or cementitious material.

4. Technical Data

APPLICABLE STANDARDS

American Society for Testing & Materials (ASTM)

ASTM C979 Standard Specification for Pigments for Integrally Colored Concrete

ASTM D50 Standard Test Methods for Chemical Analysis of Yellow, Orange, Red and Brown Pigments Containing Iron and Manganese

ASTM D1208 Standard Test Methods for Common Properties of Certain Pigments

ASTM E308 Standard Practice for Computing the Colors of Objects by Using the CIE System

ACI International (American Concrete Institute)

ACI 301 Specifications for Structural Concrete in Buildings

ACI 302.1 Guide for Concrete Floor and Slab Construction

ACI 303 Standard Specification for Cast-in-Place Architectural Concrete

ACI 304 Heavyweight Measuring, Mixing, Transporting, and Placing

ACI 305 Hot Weather Concreting

ACI 306 Standard Specification for Cold Weather Concreting.

ACI 308 Standard Practice for Curing Concrete

Portland Cement Association (PCA)

PCA SP021.02A Color and Texture in Architectural Concrete

PCA PA124.01H Finishing Slabs with Color and Texture

PCA ISO01.08T Effect of Substances on Concrete and Guide to Protective Treatments

PHYSICAL/CHEMICAL PROPERTIES

Test reports are available to design professionals upon request.

PRECISION-PAC Integral Colors are inert, lightfast, limeproof, and water wettable synthetic and natural iron oxides, free from fillers and extenders.

5. Installation

PREPARATORY WORK

Handle and store product according to APC recommendations (see precautions). The subgrade should be adequately compacted, well drained, uniformly graded, thoroughly dampened, but free from standing water to reduce cracking. All adjacent areas should be masked off with plastic sheeting.

METHODS

All concrete should be batched by the same company and the same plant if possible in order to prevent possible cement shade variations. All concrete should be placed at the same slump. A 3" - 4" (76 - 102 mm) slump is recommended with a maximum slump of 5" (127 mm).

Integrating Into Concrete Mixing Truck

When integrating PRECISION-PAC Integral Color into the concrete in a mixing truck, consistent practice must be followed throughout the job. The color should be added at the batch plant (preferred) or at the jobsite. Add PRECISION-PAC Integral Color by weight directly into the mixer along with aggregate, cement and water. During integrating the transit mixer should operate at charging or mixing speeds of 50 - 100 revolutions for 5 to 10 minutes after adding the PRECISION-PAC Integral Color.

Placing

Concrete should be placed and screeded using accepted industry procedures. A jitterbug or rollerbug may be used to bring cream to the surface for easier workability and better dispersion of the PRECISION-PAC Integral Color. The concrete should be bull floated with a wood or magnesium bull float.

After screeding, the floating procedure should not begin until all bleed water has dispersed to avoid serious scaling, dusting, crazing, efflorescence and irregular coloring. Various finishing techniques may be begun at this time such as broom, rotary, textured patterns (stamped concrete) or exposed aggregate finishes.

If the final finish is to be a steel trowel finish, care should be taken that the final strokes be made in the same direction. Do not over-trowel and do not sprinkle or fog water on concrete. This will cause variation in color intensity. After colored concrete has achieved initial set (as soon as the next day in warm climates, and as long as 10 days in cold climates), PRECISION-PAC colored concrete may be sand-blasted to produce another finish variation.



APC Canyon Rust Slab Pour

Curing/Sealing

Curing/Sealing should begin as soon as possible after the final finish is completed. To protect and help cure the concrete, 2 coats of APC's PRECISION CLEARSEAL Acrylic Sealer may be applied. It should be applied at a rate of 250 - 350 SF per gallon per coat.

Alternately, APC's PRECISION COLORSEAL 30% Solids Pigmented Acrylic Sealer may be applied. It should be applied at a rate of 250 - 350 SF per gallon per coat. The pigmented sealer is supplied in colors to match the PRECISION-PAC Integral Color used in the concrete to minimize minor surface blemishes and efflorescence.

Complete sealer product usage recommendations are available upon request.

PRECAUTIONS

When PRECISION-PAC Integral Color is stored under normal conditions in a moisture free environment, a shelf life of at least 1 year from the date of purchase will be obtained. First in, first out (FIFO) inventory management should be observed.

PRECISION-PAC Integral Color should never be the first ingredient added to the concrete mixing truck. The addition of water and aggregate should precede the color.

Once placement of a batch of PRECISION-PAC Integral Colored Concrete has begun, no water should be added to the remainder of the batch as lighter shades will result.

6. Availability & Cost

AVAILABILITY

APC materials are available throughout the world through strategic distribution points. They may be purchased through your local ready-mixed concrete supplier, various construction supply houses, or in some cases directly from APC. APC's corporate headquarters should be contacted for information on the nearest distribution point or representative.

COST

The cost of adding PRECISION-PAC Integral Color pigments to a cubic yard of concrete for a 5 sack mix on a material-only basis, f.o.b. distribution points, is approximately \$5.25 - \$75.00 depending on color selected. Budget installed cost information may be obtained from a qualified contractor, distributor or directly through APC.



7. Warranty

All recommendations, statements and technical data contained herein are based on tests believed to be reliable and correct, but accuracy and completeness of tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. Users shall rely on their own information and testing to determine the suitability of the product for the intended use. The user assumes all risks and liability resulting from use of this product.

Seller's and manufacturer's sole responsibility shall be to replace the portion of the manufacturer's product which proved to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third party for any injury, loss or damage directly or indirectly resulting from the use or inability to use the product. Recommendations or statements, other than those contained in a written agreement signed by an officer of the manufacturer, shall not be binding upon the manufacturer or seller. Additional information on warranty conditions, duration and remedies may be obtained from the manufacturer.

8. Maintenance

PRECISION-PAC Integral Colored Concrete is virtually maintenance-free. Should the concrete surface become contaminated with dirt, oil or debris, it may be scrubbed with a mild detergent solution and then rinsed with clear water. After 2-5 years of use, the luster of the sealer may diminish; however, this does not mean the sealer has dissipated. At that time, and at the owner's discretion, another coat or two of APC's Acrylic CLEARSEAL may be applied to renew the appearance of the surface.

9. Technical Services

Technicians at the APC plant and laboratory provide expert design assistance and technical support through personal representation and a toll-free telephone number. For technical assistance, contact APC.