# SOLOMON COLORS, INC. DRY INTEGRAL COLORS

These color chips represent shades of Solomon Colors Dry Integral Colors based on medium tone gray Type I-II Portland cement with 4" slump and a 6 sack mix. Use this chart as a guideline only. The colors may not exactly represent the final color. Shade variations of cement and aggregate, plus variations in the mix design, volume of water, addition of admixtures and other additives, etc., may have an effect on the final color. Therefore, we recommend that a test slab be poured and approved prior to the start of the job.

| 1% LOADING<br>1 - 25 lb. bag<br>per 4 yds/1.04 lb. sack | 2% LOADING<br>1 - 25 lb. bag<br>per 2 yds/2.08 lb. sack | 4% LOADING<br>1 - 25 lb. bag<br>per 1 yd/4.16 lb. sack |
|---|---|---|
| 413 Colony Red | 413 Clay | 413 Terra Cotta |
| 417 Rose | 417 Brick Red | 417 Apple Red |
| 489 Dusty Rose | 489 Light Plum | 489 Dark Redwood |
| 288 Rosemary | 288 Ginger | 288 Straw |
| 750 Desert Tan | 750 Salmon | 750 Peach |
| 366 Blush | 366 Dark Blush | 366 Natural Red |
| 775 Sand | 775 Cedar | 775 Sedona |
| 755 Trail Dust | 755 Driftwood | 755 Apricot |

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|---|---|---|
| 306 Canvas | 306 Toffee | 306 Cinnamon |
| 238 Thyme | 238 Doeskin | 238 Marigold |
| 338 Earthen | 338 Rawhide | 338 Leather |
| 385 Taupe | 385 Lava | 385 Bark |
| 242 Sandstone | 242 Sahara | 242 Nutmeg |
| 5092 Olive | 5092 Sage | 5092 Avocado |
| 920 Slate | 920 Smoke | 920 Onyx |

| 1 - 25 lb. bag per 4 yds. | 1 - 25 lb. bag per 3 yds. | 1 - 25 lb. bag per 2 yds. |
|---|---|---|
| *908 Lunar Eclipse | *908 Asphalt | *908 Ultra Black |

**Caution: 908 Carbon Black can negate the amount of entrained air in the concrete mix. See back for more information.*

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## TECHNICAL SPECIFICATIONS

IRON OXIDE PIGMENTS

Solomon Colors Dry Integral Color is the simple, cost effective way to color concrete. Create consistently colored concrete using the Solomon pigment products. Each batch of blended pigments is checked for quality and consistency. Packaging in convenient sizes of re-pulpable paper bags enables a large range of color possibilities without the need to open bags to weigh product. Architectural documents for Solomon Colors products including CSI MasterFormat Architectural Specifications, BIM files, and LEED documents can be obtained at www.solomoncolors.com.

Solomon Colors Dry Integral Color contains pure red, yellow, and black iron oxides. Each of these colors is 95% to 99% minus 325 mesh particle size. Solomon Colors iron oxides are permanent, inert, stable to atmospheric condition, sunfast, lime-proof, and free of deleterious fillers. Solomon Colors pigments comply with ASTM C979 for integrally colored concrete.

PACKAGING: 16 standard colors deliver 48 separate (distinct) concrete color shades. As shown, each color on the Solomon Color Card illustrates dosages ranging from 1 bag per 4 yards, 1 bag per 2 yards, to 1 bag per 1 yard of concrete.

COLOR SELECTION: The color card approximates non-sealed color shades of Solomon Colors integrally colored concrete based on medium tone gray Type 1-2 Portland cement with a 4" slump. The final color shade will be affected by the local cement, aggregates, addition of admixtures, water-to-cement ratio, curing, sealing, finishing methods, and the slab surface texture. The final color of lower color loadings such as 1 bag per 4 yards are influenced to a greater degree from cement and aggregate shades utilized in the mix design. A job site sample or test slab should be poured using the specified materials and the finishing and curing techniques that will be used on the project.

SOLAR REFLECTION INDEX (SRI): SRI is the measure of a surface's ability to stay cool in the sun by reflecting solar radiation and emitting thermal radiation. The SRI value is calculated according to ASTM E1980. The SRI values are indicated next to the color swatch on reverse side.

MIX DESIGN: The key to a uniform concrete color is consistency throughout the job.

- The mixer drum should be clean with little or no buildup on fins.
- Mixer should be loaded to a minimum of 30% capacity to ensure good color dispersion.
- Consistent color can only be achieved by using the same mix design throughout the job (same sand, cement, admixtures, aggregates, and water-to-cement ratio).
- Consider adding UltraFiber 500® cellulose fiber reinforcement to your decorative project. UltraFiber 500® provides excellent secondary reinforcement, is invisible in concrete, and yields an aesthetically perfect finish with no special finishing practices. Links to Ultra Fiber 500® TIS information: www.solomoncolors.com.
- Maintain a 4" slump (10 cm), (low water-to-cement ratio). Higher slumps (maintaining low water-to-cement ratio) may be obtained by using water reducers. Note: Use of plasticizers, water reducers, and air entraining products designed for use with colored concrete are acceptable. However, Solomon Colors strongly recommends the use of test slabs to determine final color outcome.
- Caution: Use of calcium chloride can cause discoloration on the surface of the concrete. Non-chloride accelerator, including hot water, are acceptable.
- When using Solomon Colors Dry Integral Color in re-pulpable bags, slit the bag along the top dotted line, and completely remove and discard the top portion of the bag. Reverse the drum and slowly bring the concrete to the back of the drum near the chute. Add the bag(s) of color in the concrete mix and slowly draw them back into the mixer. Mix the re-pulpable bag(s) for a minimum of 10 minutes at high mixing speed. This allows the proper dispersion and bag disintegration in the mix.
- When using small ¼" (0.6 cm) or smooth rounded aggregates, or sand-blasted or exposed aggregate finishes, do not add the re-pulpable bag to the mixer. Add only the color pigment by opening the bag and pouring all color into the mixer.

PREPARATION OF THE SUB-GRADE: Preparing the subgrade with compacted aggregate, free of frost, with no standing water is essential. In hot conditions, dampen the subgrade before each pour to keep moisture in the concrete to allow better hydration. Keep the sub-grade moisture consistent throughout the day without allowing the water to pool. Pouring concrete directly over plastic can lead to numerous problems including excessive bleed water, uneven drying time, shrinkage, cracking, and efflorescence. Consider adding 2" to 4" of sand between plastic and concrete. If pouring directly over plastic, mix design may need to be altered. Consult with your ready-mix concrete supplier.

FOR VERTICAL APPLICATIONS
(CAST-IN-PLACE OR TILT-UP WALL)
All forms should be cleaned thoroughly prior to use or reuse, and applied release agents should be non-staining. For best results, forms should be free of cement residue from any prior concrete pour of a different color. Vertical wood forms should be made of medium-density overlay plywood. For color uniformity, methods and material used in preparing the forms should be consistent through the completion of the job. Lightly and uniformly sandblasting vertical surfaces is highly recommended to remove minor form marks and any colored residue resulting from water, cement and coloring agents bleeding toward the forms during concrete placement.

PLACING AND FINISHING: Initial floating should be discontinued as soon as the surface becomes wet. Floating may be resumed after the surface water disappears. Additional water should not be applied to the concrete surface during finishing. We recommend using DAY1 Finishing Aid, a colloidal silica-based topical additive, as an alternative. Applied during floating and troweling, DAY1 increases cream, making for easier, better finishing and extended workable time under adverse conditions. DAY1 does not alter the water-to-cement ratio. It provides moisture-retention performance like a liquid membrane forming curing compound. Ideal for all colored and decorative concrete applications. Links to DAY1 Finishing Aid TIS information are available at www.solomoncolors.com. Do not use a wet broom on finished concrete.

CURING: Never use plastic sheeting or water spray to cure colored concrete. Cure with Brickform Cure & Seal products to cure freshly placed concrete. These or similar products should meet ASTM Standards C 309 and C 1315 for curing new architectural concrete flatwork. Failure to follow these guidelines can lead to uneven curing and coloration. Please reference the appropriate Brickform Cure & Seal TIS for full description of product use at www.solomoncolors.com

SEALING: Protect the beauty of your decorative concrete project with Brickform solvent or water base sealers. Brickform sealers are available in high gloss, medium gloss, or matte finish appearances. Information on Brickform sealers is available at www.solomoncolors.com

Follow professional standards and guidelines such as those from the American Concrete Institute (ACI) and the American Society of Concrete Contractors (ASCC) for concrete applications.

WARRANTY: This product is not intended for public use and is intended for use by licensed contractors and installers, experienced and trained in the use of these products. It is warranted to be of uniform quality, within manufacturing tolerances. The company has no control over the use of this product, therefore; no warranty, expressed or implied, is or can be made either as to the affects or results of such use. The exclusive remedy of the user or buyer and the limit of the liability of this company shall be the purchase price paid by the user or buyer for the quantity of the Solomon Colors Inc. products involved.

For more information go to: www.solomoncolors.com

**908 Carbon Black: Due to the particle size of Carbon, it can dissipate out of concrete over time. Solomon Colors recommends sealing the concrete with a Brickform concrete sealer. Maintain a proper sealer maintenance program to protect the surface color. Carbon particles will decrease the amount of entrained air during the mixing process. Monitoring air content to specification will be necessary.*

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To improve a colored concrete project, consider using UltraFiber 500 and DAY1 Finishing Aid made by Solomon Colors.
**UltraFiber 500 will not ball or fuzz, and is the only fiber to accept color. D**AY1 lubricates the surface and eliminates the need to add water to the surface.
See www.solomoncolors.com for more information.