

DISPERSED BLACK™

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Supersedes all previous publications



Product Description

DISPERSED BLACK™ is a black coloring agent for portland cement concrete. It is specially formulated carbon black dispersion in liquid form. When added to concrete mixes DISPERSED BLACK™ uniformly mixes throughout wet mix. It readily colors concrete from a dark black to light gray with the addition rate of 1 gallon (3.8 liters) or less for each 94 pound (42.6 kg) bag of gray portland cement. Adding color to your concrete is an excellent investment and increases property value.

LAMBERT'S DISPERSED BLACK™ is the easiest, cleanest, and most economical method to introduce carbon black colorant into a concrete mix. It is usable for roads, walkways, patios, driveways, runways, or wherever shades of gray or black concrete are desired.

Installation

Before using this product, please refer to the Material Safety Data Sheet for additional information. Proper handling precautions MUST be followed. The conditions of use, handling, and application of this product and information (whether verbal or written), including any suggested formulations and recommendations, are beyond Lambert Corporation's control. Therefore, it is imperative that testing be performed to determine satisfaction and suitability for intended use and health, safety, and environmental issues. The following information is meant as a guideline of best industry practices. While Lambert Corporation does suggest adherence to these guidelines, unforeseeable variables and/or developed successful installer practices may cause variation in methods and/or results.

Batching Color

The key to color success is batch to batch consistency and adherence to good concrete construction practices. The pigment amount to be added must be determined by weight.

Concrete Transit Mix Design

Cement for the entire color job should be the same type, brand, and from same mill. All aggregate should be supplied from same source. Mix design should remain constant. If the content varies, the pigment content must be adjusted to maintain the weight ratio of DISPERSED BLACK™ to cement. Rinse the mixer drum thoroughly before batching colored concrete. Add color by weight directly in to the mixer along with the aggregate, cement, and water while the mixer is operating at charging or mixing speed. Add a precise amount of water. Variations in amount of water will influence density of concrete and ultimate color intensity. Continue mixing for 5-10 minutes or from 50 to 100 revolutions, until the mass is free from spots or streaks of color.

Horizontal Concrete – Subgrade

A successful concrete slab starts with a well-drained subgrade that can uniformly sustain the weight of the slab as well as the load imposed on the slab. The subgrade should be uniformly graded, compacted, and thoroughly dampened, and should be free of any soft or muddy spots, or free standing water.

Concrete Placing

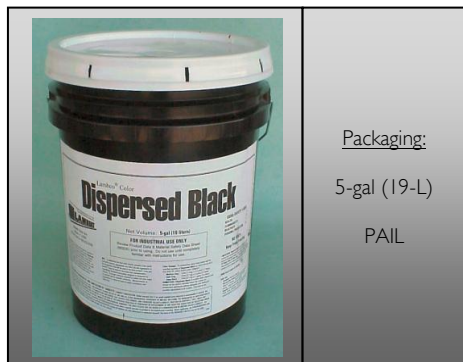
Integral colored concrete does not require special procedures for placing and finishing, however greater care and good application practices must be followed. All colored concrete should be placed at the same slump, using the lowest slump consistent with a working and placing mix. **A 4-inch (10.2 cm) slump is recommended, 5-inch (12.7 cm) maximum but all concrete should be placed at the same water/cement ratio. This is very important to the end uniformity of job color. Once a portion of the batch has been placed, no water should be added to the remaining batch.** Concrete should always be placed in the forms as near the final location as possible. Movement should be minimal, as it encourages segregation. Be sure to cover all nearby slabs and structures to avoid splatters from the new colored concrete.

Finishing

For color uniformity, finishing should be done with extreme care. Place and consolidate the concrete avoiding excessive manipulation. Screeds, tamp, and float to desired level. Finishing must not begin until bleed water has left the surface to avoid serious scaling, dusting, crazing, uneven color or efflorescence. Avoid excessive floating. Do not add water to the concrete while placing or finishing, or over-trowel, as this will cause discoloration. A broom, rotary, or textured finish is recommended over a smooth hard-troweled finish. Architectural vertical concrete and tilt-up panels should be textured, and lightly sandblasted.

Admixtures

LAMBERT CORPORATION does not pre-blend any concrete admixture with the DISPERSED BLACK™. Pre-blending admixtures cannot meet all requirements for every situation and the methods of pre-blending can add unnecessary costs to the finished product. Since there are no additional concrete additives in DISPERSED BLACK™ the concrete designer is free to take advantage of locally available proven materials that are generally lower in cost.



Packaging:
5-gal (19-L)
PAIL



Important Points

- Do not schedule colored concrete if rain is expected the day of, or following pour.
- Moist, uniformly compacted sub-grade is important. Wetter areas and thicker portions of concrete will set slower than drier and thin portions of concrete.
- Color should be added at the batch plant to ensure good mixing.
- Be sure to maintain uniform consistency from batch to batch, 4-inch slump is recommended.
- Place uniformly and in same order as finishing operations will be done.
- After screeding, use bull float before water comes to surface.
- Proper timing for final finishing is important. Second floating should not begin until surface water and sheen has disappeared and surface has taken initial set. Stiff yet workable.
- Textured surfaces, broom, rubber, or wood float, should be done immediately after second floating.
- Care should be taken with smooth hard-trowel surfaces to avoid trowel burns. Lambert Corporation recommends a curing and sealing treatment. Contact your supplier for supporting products.

UNEVEN CURING AND/OR DRYING, WILL RESULT IN UNEVEN COLOR

Efflorescence

Efflorescence, sometimes called blooming or scumming, is a white crystalline deposit on the surface of concrete. It is more easily observed on dark colored surfaces than on concrete of natural color, and for this reason the effect is sometimes attributed to the colored pigment. In actuality, this is not the case, as properly selected pigments contain no foreign materials in such quantities as to cause efflorescence. Usually the white crystal consists of Calcium Carbonate resulting from the action of Carbon Dioxide in the air or water with the free lime salts in the hardened cement paste to form carbonates. Special efflorescence cleaners may remove the Calcium Carbonate.

Limitations

Colored concrete is composed of a mass of coarse and fine aggregate, cemented together with a hardened cement paste in which **DISPERSED BLACK™** is diffused. To determine exactly the final color obtained using certain cement, sand and aggregates, a test panel should be prepared using the proportions replicating the final product. These panels should cure a minimum of seven (7) days. When the choice of ingredients and proportions is made, all subsequent mixes should follow the same formula. Accurate measurement of color is important. Thorough mixing is necessary to realize full color value of pigment and to maintain uniformity from batch to batch.

KEEP PRODUCT FROM FREEZING. STIR WELL BEFORE USE, AND DO NOT USE MORE THAN THE RECOMMENDED QUANTITIES. AIR ENTRAINMENT MAY BE REDUCED IN SOME MIX DESIGNS. TEST BATCHES PRIOR TO USE TO DETERMINE EFFECT ON AIR ENTRAINMENT.

The color effect of **DISPERSED BLACK™** in concrete can sometimes be weakened from the repeated wetting and drying cycles of outdoor exposure. Lambert recommends all colored concrete be sealed. Contact your supplier for Lambert's supporting sealer products.

DISPERSED BLACK™ color is designed for mix-in use only. The maximum dosage rate of color should not exceed 10% of the total weight of cement in the mix design. Fly ash, because of its color variations, is not to be used in colored concrete. Avoid the use of calcium chloride accelerators, as it will affect the uniformity of color. **DISPERSED BLACK™** is a carbon black and should not be used in air-entrained concrete mixes without adequate prior testing for possible changes in air content in the mix design. The conditions of use and application of the product and information, whether verbal or written, including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test the product and information to determine individual satisfaction and suitability for intended use and application. This application/specific analysis must, at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint.

Coverage

Requirements per 94 pound bag of Gray Portland Cement	
Medium Gray	4 lbs or ½ gallon // 1.8 kg or 1.7 liters
Dark Gray	6 lbs or ¾ gallon // 2.7 kg or 2.4 liters
Deep Black	9 lbs or 1 gallon // 4.1 kg or 3.8 liters

DISPERSED BLACK WEIGHT

9.2 pounds per Gallon (1.1kg/L)

FIRST AID

- Inhalation - Remove to fresh air.
- Eye and Skin Contact - Promptly wash eyes with plenty of water for 15 minutes. Consult a physician if irritation persists. Wash skin with soap and water.
- Ingestion - Drink plenty of water, may cause irritation of the mouth, throat, or stomach. Do not induce vomiting. Seek medical attention for all overexposures.

**KEEP OUT OF REACH OF CHILDREN.
FOR INDUSTRIAL USE ONLY.**