

**LANXESS**  
Energizing Chemistry

**1. Product Name**

Bayferrox<sup>a</sup> Iron Oxide Pigments

**2. Manufacturer**

LANXESS Corporation  
111 RIDC Park West Drive  
Pittsburgh, PA 15275-1112  
(800) 526-9377  
(412) 809-2212  
Fax: (412) 809-3599  
E-mail: paul.croushore@lanxess.com  
www.Bayferrox.com

**3. Product Description**

**BASIC USE**

Bayferrox<sup>a</sup> synthetic iron oxide pigments are one of the most popular color pigments worldwide for coloring concrete. Bayferrox is suitable for all types of concrete products, including ready-mixed and architectural concrete, concrete blocks, bricks and paving stones, concrete roofing tiles, segmental retaining wall units, architectural precast products, colored mortar cement, stucco and grout. New applications are always being developed. Consult manufacturer.

**COMPOSITION & MATERIALS**

The most widely used pigments for coloring concrete are synthetic iron oxides. Bayferrox pigments meet stringent color and quality specification parameters set forth by ASTM C979. To help meet these standards, the LANXESS production facilities are ISO 9000-2000 certified.

**SIZES**

Bayferrox pigments are available in 50 lb (23 kg) bags, bulk bags, and in custom sized packaging.

**FINISHES**

Final color and appearance are functions of a number of variables, including amount of pigment in the mix, water-to-cement ratio, other mix components such as aggregates and admixtures, finishing technique and curing conditions.

**COLORS**

At low pigment level concentrations, these pigments can turn gray concrete into a wide range of earth tone colors which show virtually no fading after many years of weather exposure. A full range of high quality color pigments, including yellows, reds, blacks and browns, is produced for a variety of applications. These pigments are available in more than 24 primary colors and hundreds of blends. The shades indicated on the manufacturer's color cards have been chosen for their popularity. Numerous other shades are available.

**LIMITATIONS**

Consult manufacturer's technical literature for recommended and excluded uses.

**4. Technical Data**

**APPLICABLE STANDARDS**

ASTM International - ASTM C979 Standard Specification for Pigments for Integrally Colored Concrete

International Organization for Standardization (ISO) - ISO 9000-2000 Quality Management and Quality Assurance Standards, Parts 1 - 3

**APPROVALS**

The LANXESS manufacturing plants for Bayferrox are ISO 9000-2000 series certified by the International Organization for Standardization (ISO).

**ENVIRONMENTAL CONSIDERATIONS**

The LANXESS manufacturing process converts scrap iron into premium iron oxides; minimal salts, no sulfur dioxide or crystalline silica is produced. Use of these products can produce nominal amounts of dust. Use appropriate protective clothing and respiratory protection. Material Safety Data Sheets (MSDS) are available upon request.

**PHYSICAL/CHEMICAL PROPERTIES**

These pigments are stable under exposure to sunlight and ultraviolet (UV) radiation, and are alkali and weather resistant.

**5. Installation**

**PREPARATORY WORK**

Handle and store product according to LANXESS recommendations. Keep materials dry and in their original packaging until ready for use. Once the specific mix design and sequencing of raw materials have been established, it should not be altered. Consistency of



Bayferrox<sup>a</sup> Iron Oxide Pigments impart color in concrete products.

raw materials in all phases of manufacturing is the most important element in making quality colored concrete.

**METHODS**

Bayferrox pigments should be added to the concrete mix, not sprinkled or dusted onto the surface of the concrete. The amount of color to be used ranges from 1/2 lb (0.23 kg) up to 7 lb (3 kg) per 94 lb (43 kg) bag of cement. ASTM limits the maximum amount of color per batch to 10% of the cementitious material in the mix. For colored ready-mixed concrete, add carefully weighed aggregates, then add 1/2 to 2/3 of total batch water. Add exact amount of pigment, and mix for 1 minute. Add accurate amount of cement, approved admixtures and remaining water. Mix for a minimum of 5 minutes at high speed. Complete use recommendations for various applications are available from LANXESS.

**PRECAUTIONS**

Pigmentation levels greater than 10% of cementitious material content, per ASTM standard, can reduce concrete strength.

Health and safety recommendations must be observed when handling Bayferrox synthetic iron oxide pigments. Before working with any product mentioned in the Bayferrox product information, user must read and become familiar with hazards, proper use and handling recommendations. Consult LANXESS for more information.

## 6. Availability & Cost

### AVAILABILITY

Contact LANXESS for information on product distribution and availability. LANXESS has been making many of the same standard grades of Bayferrox for several decades. These grades are available worldwide.

### COST

Information on the cost for coloration can be obtained from a LANXESS representative. Concrete products manufacturers have cost information on their products.

## 7. Warranty

The application of these products, including any suggested formulation and recommendations, is beyond the control of LANXESS Corporation. Therefore, it is imperative that specifiers and users of Bayferrox pigments test them to ensure they meet the specific product or project requirements. All information is given without warranty or guarantee. Nothing contained in the LANXESS product information or technical recommendations is to be construed as a recommendation to use any product in conflict with patents covering any material or its use.

## 8. Maintenance

Other than normally expected cleaning or pressure washing of concrete surfaces by owner, concrete products integrally colored with Bayferrox iron oxide pigments require no maintenance beyond that of noncolored concrete or concrete products.

## 9. Technical Services

For technical assistance, contact LANXESS. A staff of trained service personnel offers design assistance and technical support.

## 10. Filing Systems

- First Source«
- MANU-SPEC<sup>a</sup>
- Additional technical and product information is available from LANXESS Corporation upon request.