

www.colored-concrete-works.com

Case Study Colombia Special





Plaza de la Libertad in Medellín

Cultural identity translated to architecture

Symbol of a free spirit.

Located in the center of Medellin, a flourishing metropolis in the center of Colombia, is an architectural monument to the "Antioqueña" tradition. Covering 12,000 m², Plaza de la Libertad is an imposing building complex that is also a powerful expression of an ideal as lofty as its heights: human kind in harmony with the environment. The natural surroundings are reflected in the building's shapes. The structures of the two towers, which rise to a height of 24- and 17-story towers, respectively, deliberately evoke associations with trees and their barks. In the true tradition of a monument, Plaza de la Libertad has many layers of meanings. The monumental complex are reminiscent of a forest and the towers of tree trunks with their barks.



The building as a whole is as monumental as giant tree trunks; its details as filigreed as branches.



An architectural invitation for encounter.



Bold structure with a message





The conceptual design language of the integrally colored concrete deliberately evokes the branching structures in natural surroundings.

Faithful coloration lends authenticity

The avant-garde meeting place is also home to various government institutions, a business hotel, television studios, businesses, a cultural center, an open-air theater and exhibitions. The color of the building itselt is inspired by nature. The structural elements of Plaza de la Libertad are based on a temperature-regulating and extremely weather resistant concrete colored with some 60 metric tons of Bayferrox® 918 LOM in the main building, and seven metric tons of the pigments Bayferrox® 130 M and Bayferrox® 318 M in the auditorium. The choice of shade has proved to be a wise one. Years of exposure to the city's pollution have not resulted in any visible blemishes to the structure's appearance. Another aspect of the use of integrally colored concrete – one that also helps to reduce costs – is the fact that unlike paint, it requires no follow-up maintenance. Furthermore, the facades have been designed to conserve resources, reducing conventional HVAC and lighting costs by around 40 percent. This project was honored with the first prize in an international competition by a Colombian National Association of architects. It was built under Colombian national association of architects Alejandro Toro Posada in association with Opus studio of architecture.

"An urban ecosystem as a meeting place and place of expressive power."

Alejandro Toro Posada, Architect and Interior Designer

Alejandro Toro Posada graduated as an Architect from Pontificia Bolivariana University before obtaining his Masters in Interior Design from the Savannah College of Art and Design in 1990.

Other focal points of his studies were business administration and the administrative development of small and medium-sized businesses. His studio contains 15 years of works of varying levels of complexity like medical centers, open plan offices, comercial fit-ins and high-ended houses.

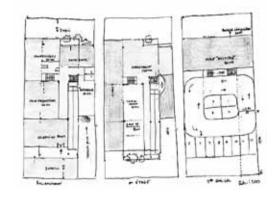
Alianza Francesa in Bogotá

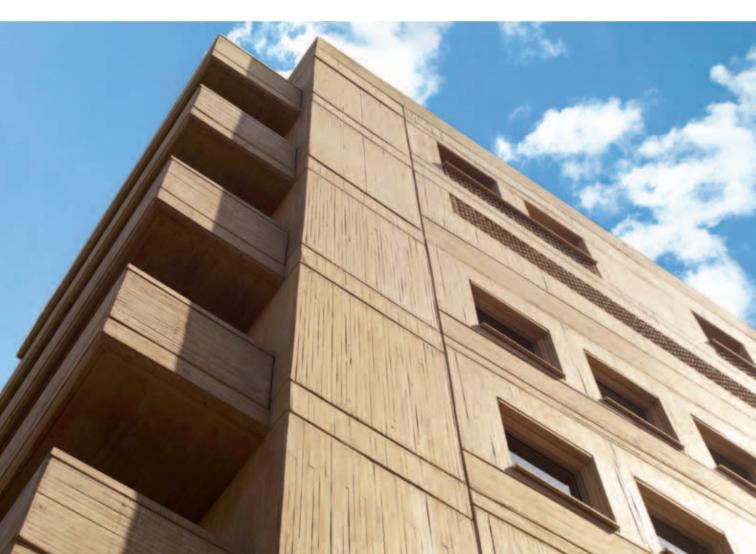
Lively alliance of form and color.

Bridge between cultures.

The Alianza Francesa is more than just a newly-created space for over 12,500 students and 10,000 books. Above all, it is an impressive legacy of Colombian star architect Rogelio Salmona, who died in 2007, and a homage to his native country of France. Intended as a place for cultural exchange, the stately, 5,300 m² structure glows in the warm ocher yellow of its sole construction material: concrete. Because light is used to interpret each room differently while at the same time the texture of the concrete walls (which were integrally colored with Bayferrox® pigments) allude to the grain of the timber cladding, the building comes across as extremely lively. An architectural concept that exudes openness - with a nod toward its design and function as an international venue for cultural exchange. The centerpiece and intersection of the Alianza Francesa is the ramp connecting the six stories. It allows the building to "breathe in" natural light,

almost like a living organism. The ramp and corridors together prove to be a sophisticated bioclimatic system that completely eliminates the need for air conditioning.





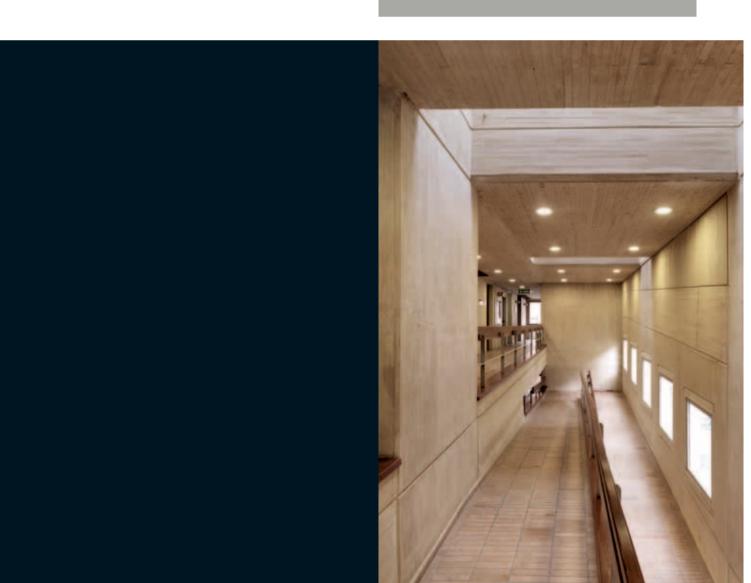


Lifelike: Integrally colored concrete with an unmistakable texture.

"The rooms are filled with changing colors that, over the course of the day, reflect the time and tell a story."

Rogelio Salmona, architect Maria Elvira Madriñan, architect

Born in Paris in 1929, Rogelio Salmona studied architecture at Universidad Nacional de Colombia. He collaborated with Le Corbusier in the early 1950s and later opened his own office in Bogotá. He is known for such works as home for Gabriel Garcia Marquez in Cartagena and the Colombian National Archive. Salmona's awards include the Alvar Aalot Medal in 2003 and the Colombian National Prize for Architecture, which he received multiple times. After Salmona's death, Maria Elvira Madriñan – his wife and also an architect – took charge of construction of the Alianza Francesa.



Plaza de la Libertad

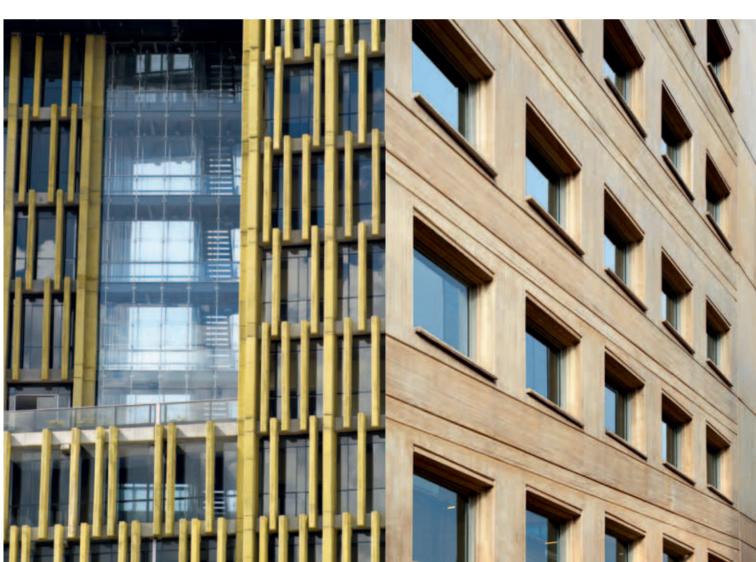
Alianza Francesa

Project data

Project data

Architecture that conveys lightness and freedom.

Integrally colored concrete brought to life in the changing light.



Building

Alianza Francesa

Location

Bogotá, Colombia

Architecture

Rogelio Salmona

Principal

Central Administration of the Alliance Francaise in Colombia

Project participants

Surtiquimicos S.A., Concretos ARGOS

Construction period

2008-2010

Area

5,300 m²

Amount of concrete

4,011 m³

Amount of pigment

12 metric tons

Form supplied

20 kg and 25 kg paper sacks

Pigments





Bayferrox® 918 LOM



Bayferrox® 130 M



Bayferrox® 318 M

Building

Plaza de la Libertad

Location

Medellín, Colombia

Architecture

Alejandro Toro Posada

Principal

City of Medellin, Antioquia Local Administration

Project participants

Surtiquimicos S.A., Concretos ARGOS

Construction period

2007-2011

Area

12,000 m²

Amount of concrete

3,005 m³

Amount of pigment

67 metric tons

Form supplied

20 kg paper sacks

Pigments











Bayferrox® 318

For more information contact our LANXESS country representative.

Germany

LANXESS Deutschland GmbH Business Unit Inorganic Pigments Rheinuferstraße 7–9 47829 Krefeld GERMANY Tel.: +49 2151 88 7741

Tel.: +49 2151 88 7741 Fax: +49 2151 88 4133

USA

LANXESS Corporation
Business Unit Inorganic Pigments
111 RIDC Park West Drive
Pittsburgh, PA 15275-1112

Tel.: +1 412 809 2000 Fax: +1 412 809 3599

Singapore

LANXESS Pte. Ltd.
Business Unit Inorganic Pigments
3A International Business Park
#07-10/18 ICON@IBP Tower B
SINGAPORE 609935

Tel.: +65 6725 5828 Fax: +65 6266 5329

Australia

LANXESS Pty. Ltd. Business Unit Inorganic Pigments Unit 1, 31 Hill Road Homebush Bay NSW 2127 AUSTRALIA

Tel.: +61 2 8748 3910 Fax: +61 2 8748 3999

Japan

LANXESS K.K. Business Unit Inorganic Pigments Marunouchi Kitaguchi Building 23F 1-6-5, Marunouchi, Chiyoda-ku Tokyo 100-8215 JAPAN

Tel.: +81 3 5293 8017 Fax: +81 3 5219 9776

United Kingdom

LANXESS Ltd.
Colour Works
Lichfield Road
Branston
Burton-on-Trent
Staffordshire, DE14 3WH
UNITED KINGDOM
Tel.: +44 1283 714222
Fax: +44 1283 714201

Brazil

LANXESS Indústria de Produtos Químicos e Plásticos Ltda. Av. Maria Coelho de Aguiar, 215 Bloco B - 2º Andar 05804-902 São Paulo BRAZIL

Tel.: + 55 11 3741 3284 Fax: + 55 11 3741 2676

South Korea

LANXESS Korea Ltd.
Business Unit Inorganic Pigments
395-62, Shindaebang-Dong
Dongjak-gu
Seoul, 156-712
REPUBLIC OF KOREA
Tel.: +82 2 6715 5170
Fax: +82 2 847 3062

Central Eastern Europe LANXESS Central Eastern

LANXESS Central Easterr Europe s.r.o. Stetinova 4 811 06 Bratislava SLOVAKIA

Tel.: +421 905 719 637 Fax: +421 2 32151624

Spain

Europigments, S.L.
Business Unit Inorganic Pigments
Arquitectura, 27
Poligono Industrial Els Garrofers
08340 Vilassar de Mar
SPAIN

Tel.: +34 93 75407 70 Fax: +34 93 75407 84

China

LANXESS Shanghai Pigments Co. Ltd. Business Unit Inorganic Pigments 845, Qi Lian Shan Lu Shanghai, 200331 P. R. CHINA Tel.: +86 21 5284 7802

Fax: +86 21 6250 1193

India

LANXESS India Private Ltd. Business Unit Inorganic Pigments Kolshet Road Thane – 400 607 Maharashtra INDIA

Tel.: +91 22 2531 1251 Fax: +91 22 2545 5152

France

LANXESS S.A.S. Inorganic Pigments Le Doublon A 11, avenue Dubonnet 92407 Courbevoie Cédex FRANCE

Tel.: +33 (0) 961 35 77 87 Fax: +33 (0)1 30 41 36 90

Health and Safety Information:

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling the LANXESS products mentioned in this publication. For materials mentioned which are not LANXESS products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be followed. Before working with any of these products, you must read and become familiar with the available information on their hazards, proper use and handling. This cannot be overemphasized. Information is available in several forms, e.g., material safety data sheets, product information and product labels. Consult your LANXESS representative in Germany or contact the Regulatory Affairs and Product Safety Department of LANXESS Germany or - for business in the USA - the LANXESS Product Safety and Regulatory Affairs Department in Pittsburgh, Pennsylvania.

Regulatory Compliance Information:

Some of the end uses of the products described in this publication must comply with applicable regulations, such as the FDA, BfR, NSF, USDA, and CPSC. If you have any questions on the regulatory status of these products, please consult your LANXESS representative in Germany or contact the Regulatory Affairs and Product Safety Department of LANXESS Germany or – for business in the USA – your LANXESS Corporation representative, the LANXESS Regulatory Affairs Manager in Pittsburgh, Pennsylvania.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suita-

ble for your intended uses and applications. This application-specifi c analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our General Conditions of Sale and Delivery, All information and technical assistance is given. without guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained in this brochure is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with industrial property rights such as patents covering any material or its use. No license is implied or in fact granted under the claims of industrial property rights such as patents.

LANXESS Deutschland GmbH Business Unit Inorganic Pigments Rheinuferstraße 7–9 47829 Krefeld GERMANY Fax: +49 2151 88 4133 E-Mail: coloredconcreteworks

@lanxess.com www.lanxess.com www.bayferrox.com www.colored-concrete-works.com

Bayferrox® is a registered trademark of Bayer AG, Leverkusen, Germany.

LAN X L S S
Energizing Chemistry

Edition 1/2012