

VIBRANTZ
TECHNOLOGIES™

Dip-Tech® Inks

Ultimate solution for
digital printing on glass

vibrantz.com



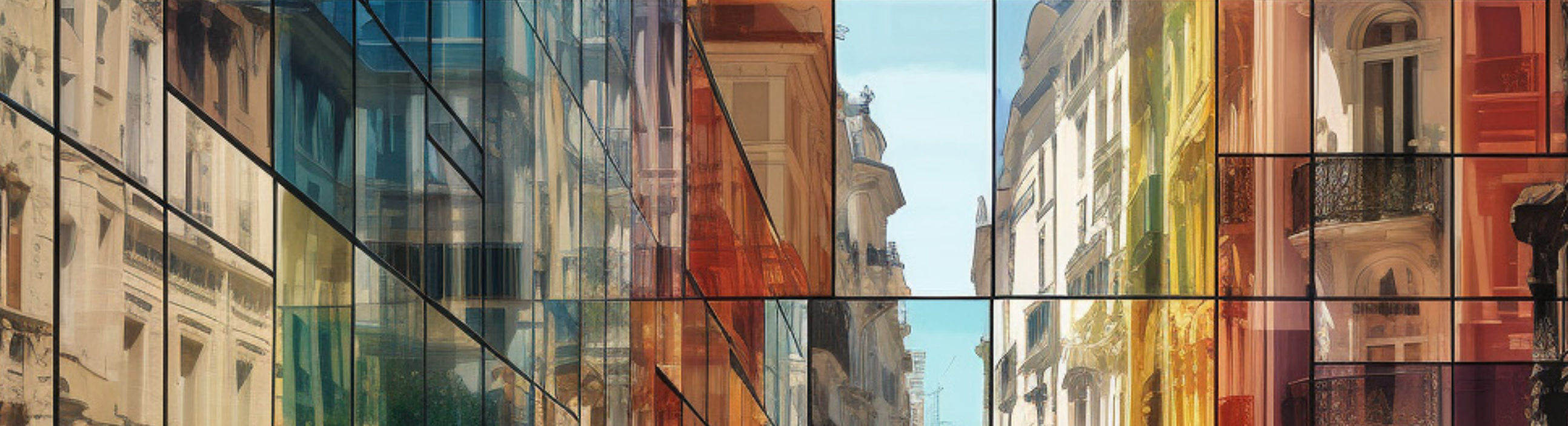


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Meet Vibrantz Technologies

Vibrantz has a 300-year combined legacy of innovation in advanced materials, color solutions and performance coatings. Our core competencies in particle engineering, color technology and glass and ceramic science have made us the standalone leader in specialty chemicals and materials solutions. Our commitment to strategic growth and innovation is underpinned by a history we are proud to call our own.

Born over 17 years ago, Dip-Tech has revolutionized the glass printing industry and today its legacy lives on within Vibrantz's trusted digital ink solutions. Supported by our dedicated team, **we're broadening our digital inks portfolio into new applications. No longer confined to a single printer manufacturer, we are expanding what's possible and customizing solutions to exceed customer expectations.**



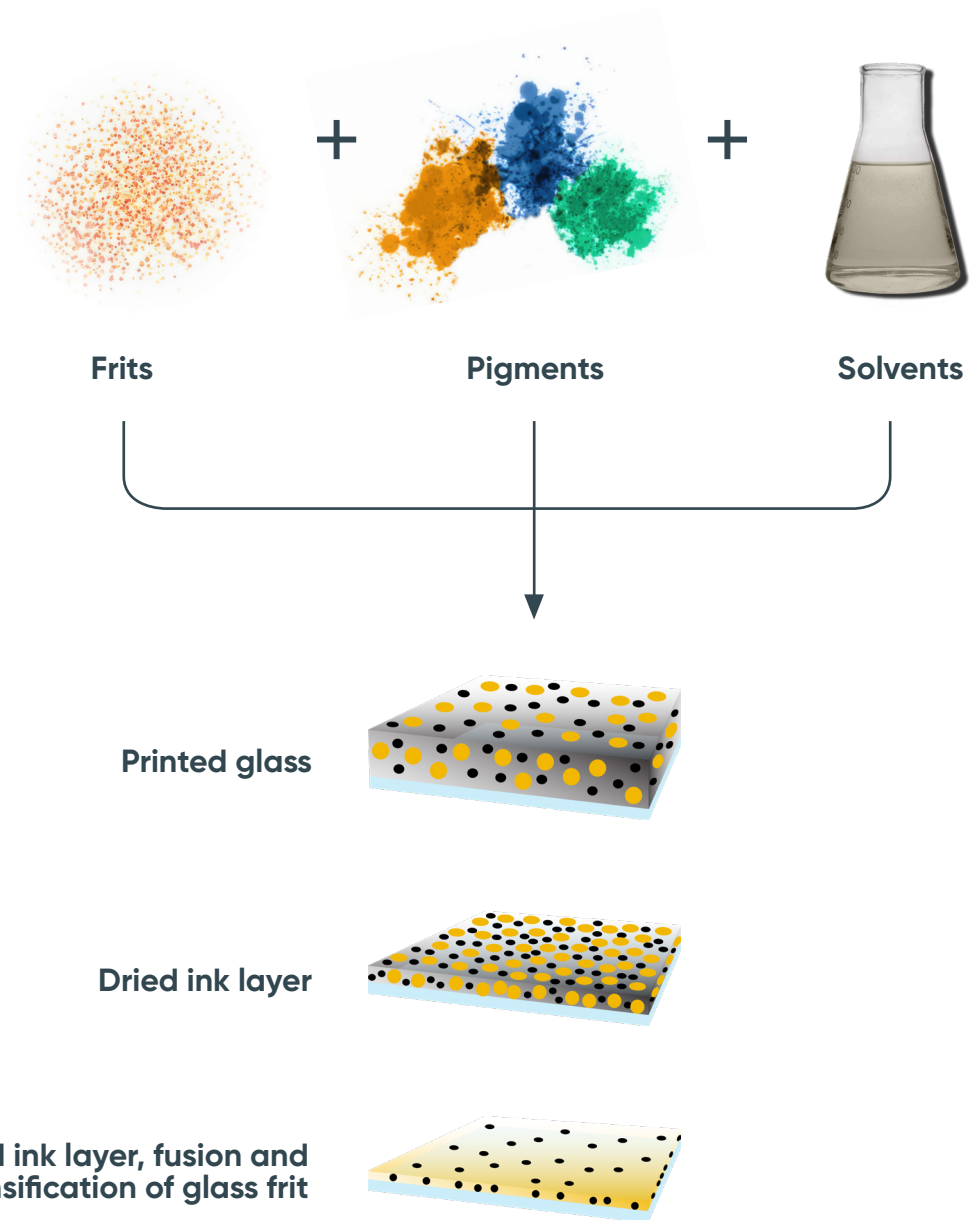
Digital ceramic inks

From raw materials to digital inks

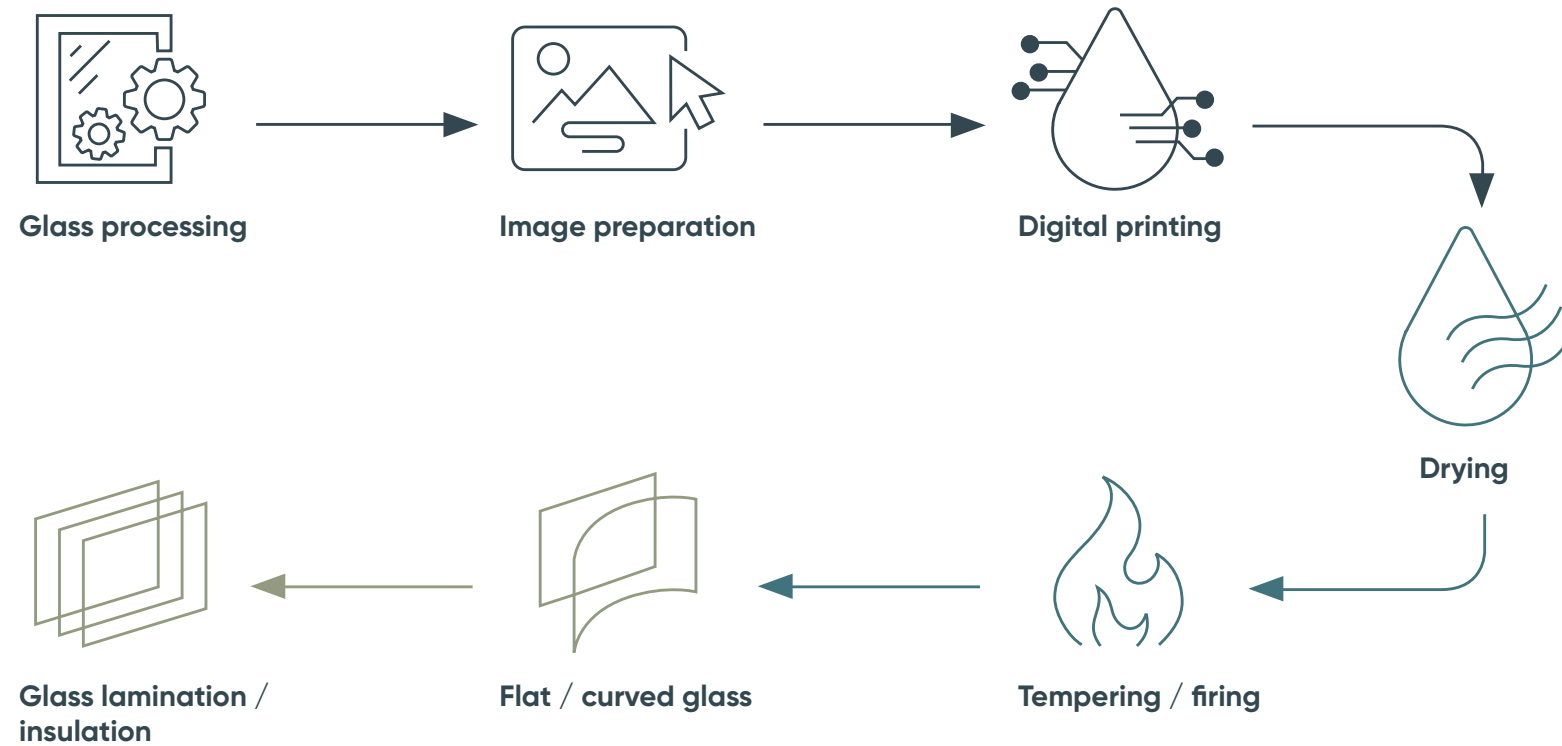
Vibrantz develops inorganic pigmented inks for digital printing on glass using inkjet printers with drop-on-demand technology. Our inks comprise glass frits and pigments in a solvent-based formulation. Under strict quality control, we grind the frit and pigments into sub-microns for a uniform dispersion. During the tempering or annealing process, the inks fuse with the glass to create durable properties that endure the life of the glass. The end-use product has aesthetic appeal and functional values such as energy efficiency, solar control, light diffusion and light transmission.

Main properties:

- Resistance to scratching, acid, ultraviolet (UV) light and weather
- Extensive color palette based on six primary colors
- Digital and premixing color shade options
- Lead- and cadmium-free
- Suitable for a wide range of tempering and firing temperatures
- REACH compliant and meet other industry standard



Printing workflow



Crafting digital colors in two ways

A unique decoration method

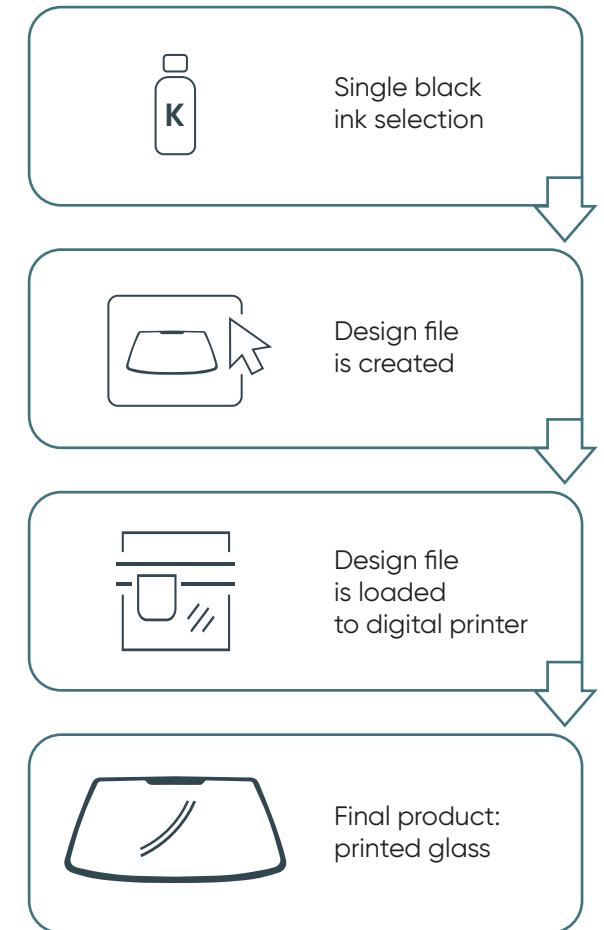
Our digital printing inks provide a gamut of specific shades of color through our CMiX and DMiX methods.



Automotive black ink

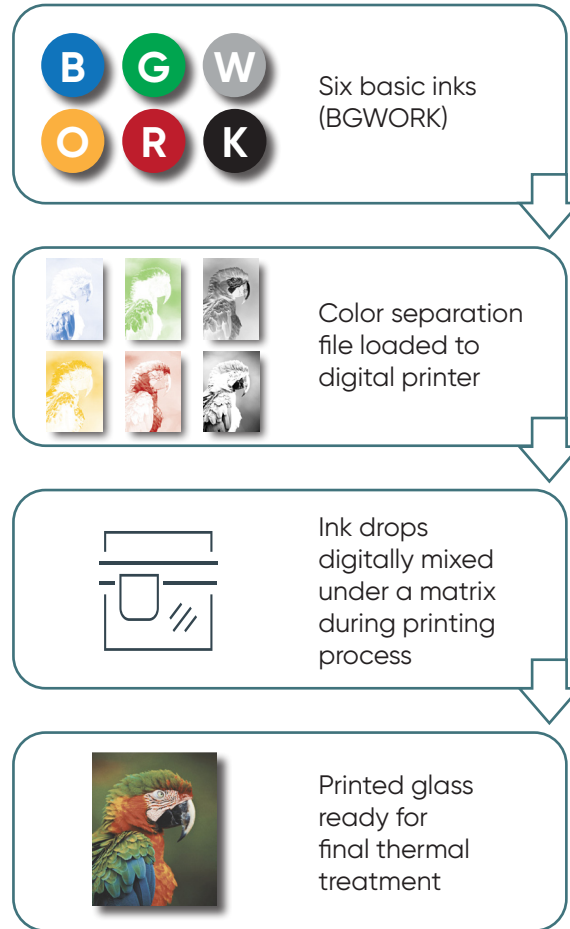
SpectrumNoir for automotive

Our automotive black digital ink is a high-performance option that is trusted by the industry for its consistent quality output. Applications include logos, QR codes and solid frames.



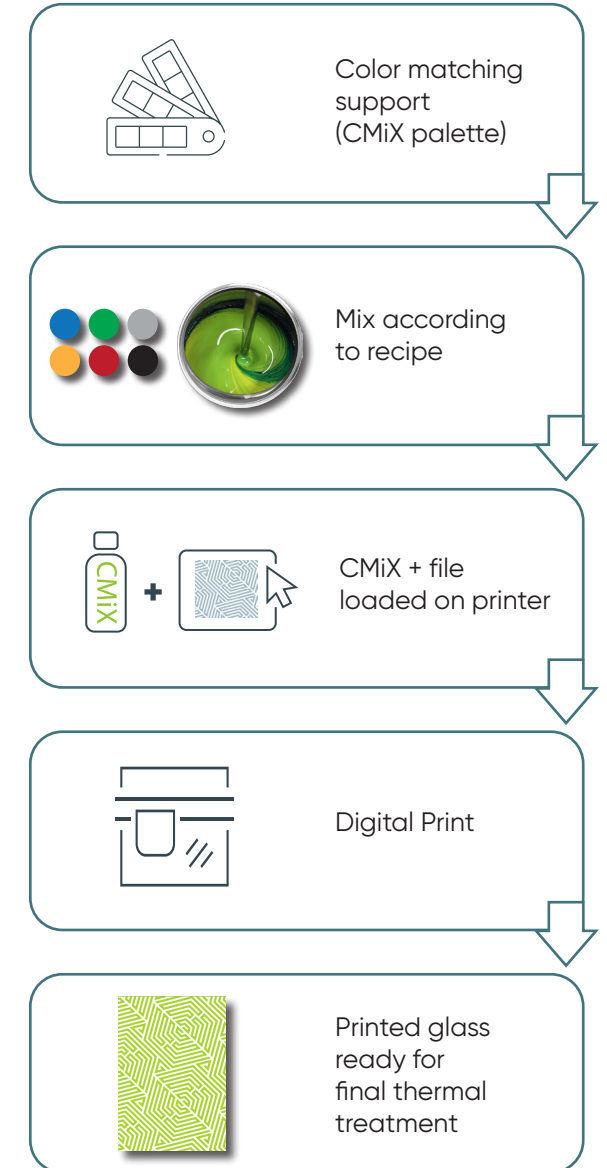
DMiX

DMiX incorporates our six basic pigmented inks (BGWORK) and combines printed dots on glass. Each dot's overlap and varying intensity generate a new gamut of colors. DMiX suits a wide range of shades, like high-resolution pictures or illustrations.



CMiX

CMiX recipes are based on BGWORK inks blended to achieve a specific new ink color. The new shades are ready to use in printers. The CMiX method suits graphics and designs requiring single or fewer solid colors. It is RAL or Pantone compatible and offers opacity control.





Automotive inks

Our digital automotive inks meet the strict standards of the automotive industry, possess high chemical resistance, optical density and dark black shades for maximum durability.

We're equipped with technical expertise to offer automotive inks for the following applications:

- Automotive replacement
- Windshields
- Curved automotive, marine, aerospace and other forms of transportation glass



Automotive ink series

SpectrumNoir is our premium automotive ink series designed for optimum optical density, UV and acid resistance making it the top choice for automotive, marine and aerospace glass applications. With over two decades of experience in the automotive industry, we are a reliable supplier with diverse solutions.

Options available include:

- Fire in the range 550 C to 700 C (process dependent)
- Suitable for single or multi-pass printing
- Anti-stick or high gloss requirements
- Industry-compliant formulations for thin ink layers and lower volatile organic compounds (VOCs)
- Silver conductive ink (also available)



Automotive replacement glass



Bulletproof and protective vehicles glass



Agricultural, construction and specialty vehicles



Rail transport



RV and buses



Marine glazing and yacht interiors



Architectural inks

Our architectural inks for digitally printed decorative glass applications capture the appeal of modern architecture and enable design customization.

Our ceramic ink technology expands the capabilities of printed glass.

Practical and complementary solutions include:

- Light diffusion
- Light transmission
- Energy conservation
- Anti-slip properties
- Bird collision prevention
- Privacy
- Durability



Climate control



Light transmittance



Glare reduction



Hidden structures



Energy efficiency



Bird safe glass

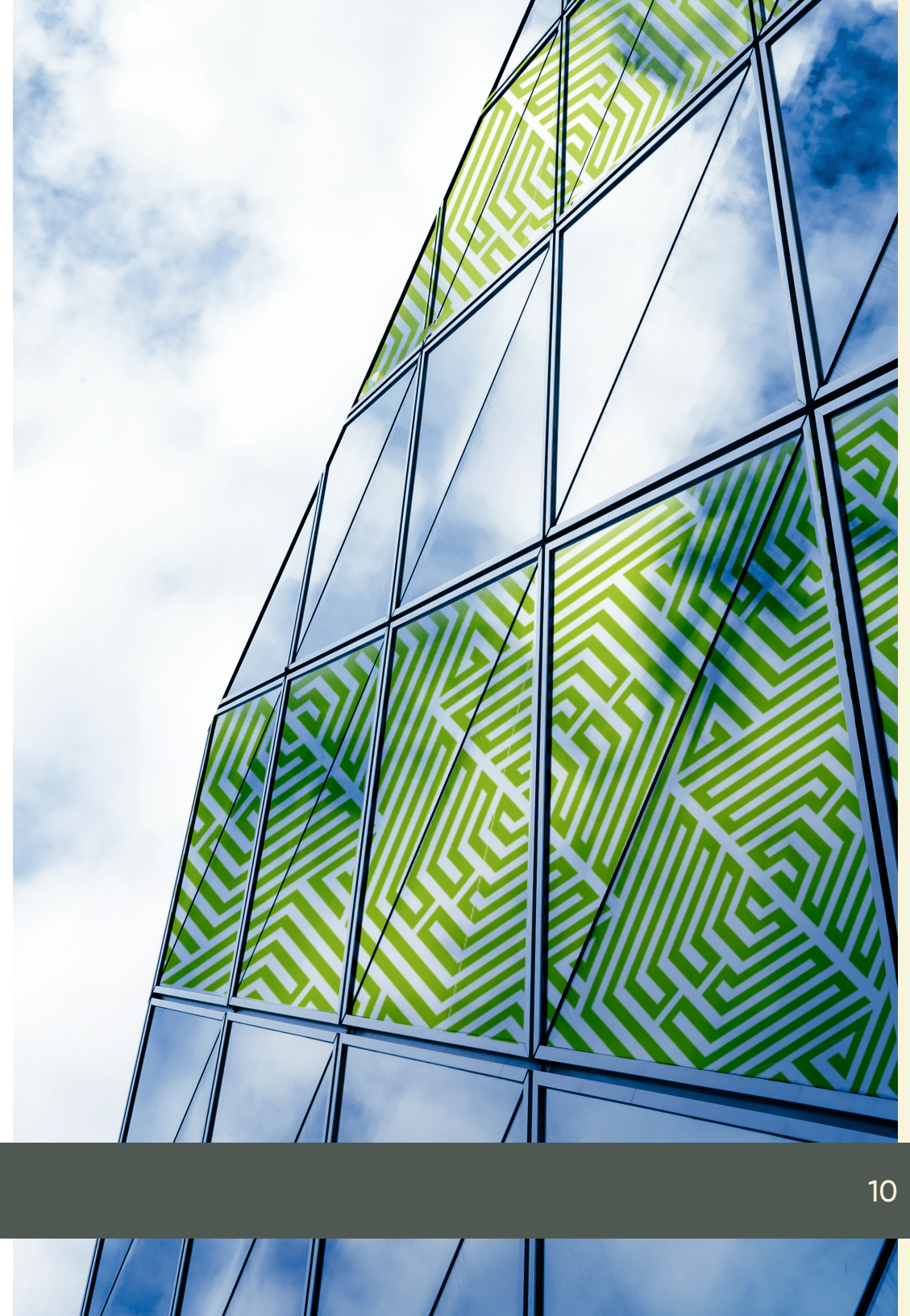


Privacy levels



Anti-slip

Architectural functionality



Architectural ink series

Our ceramic-based Spectrum ink series are designed for digital printing on architectural flat glass.

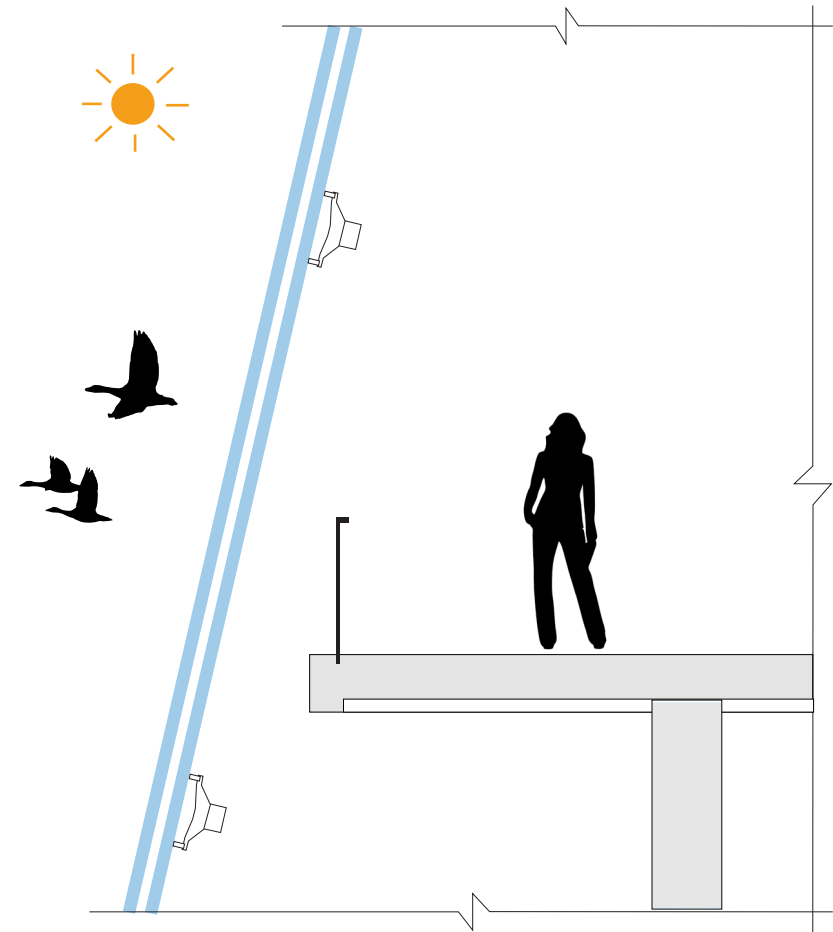
Available in six basic colors, blue, green, white, orange, red and black (BGWORK) for crafting a wide gamut of DMiX and CMiX shades.

They're compatible with lamination, IG-unit, curved and various adhesion applications.

Spectrum inks are certified, REACH compliant, meet industry standards and known for ultimate durability.

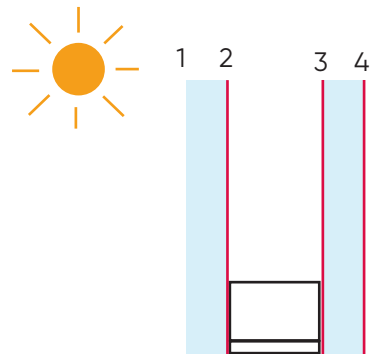
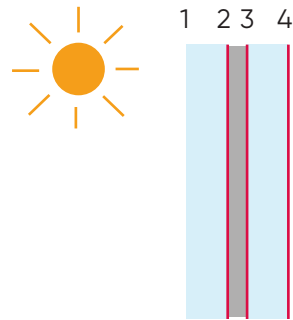
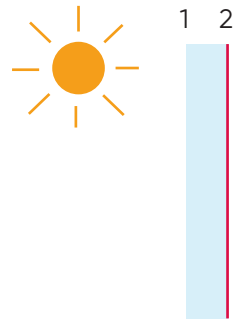
They are resistant to:

- Scratching
- Abrasion
- Water absorption



Spectrum R

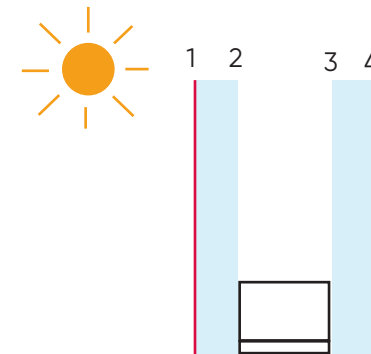
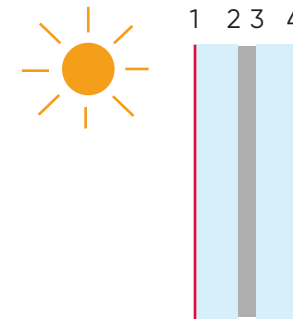
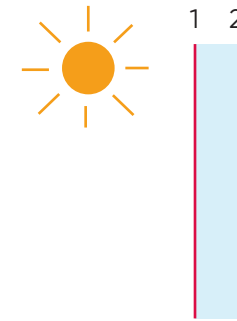
- Suitable for the widest range of firing and tempering processes
- Highest gloss and opacity colors
- Wide color range



— Printed Surface

Spectrum HD

- Suitable for standard tempering processes
- Controlled gloss and glare
- High chemical resistance for exterior surfaces and other challenging environments
- Includes functional inks



— Printed Surface

Architectural products



Spectrum R

Available colors:

- Blue, green, white, orange, red and black
- Extra opaque blue



Spectrum HD

A highly durable side1 series.

Available colors:

- Black and white
- Blue, green, orange and red range available soon



Anti-stick

- Anti-stick properties can be formulated for your individual process and suitable with any ink series.
- All inks can be customized to your specific process
- Compatible with press bending firing process
- Ideal for large glass panels bent into sharp angles and undergo low-temperature firing processes



Precious metal inks

- Adds colors with an extra shine for a brilliant metallic effect
- Ideal for premium and customized products, creative designs and patterns
- Available in gold and white gold

Functional HD

Our highly durable side1 series includes the following products:



Etch HD for a frosted effect

Our eco-friendly substitute for sandblasting or chemical etching.

Etch HD ink fuses and bonds with the glass surface during the tempering process. The resulting frost effect diffuses light and is well suited for interior glass applications including shower doors, partitions, balustrades and furniture.



Transparent HD glaze for glossy and matte effects

A transparent ink glaze that adds visual dimension over solid colors.

Our Transparent HD ink can turn any Spectrum R surface into side1 surfaces. Transparent glaze allows customers to expand the CMiX color range and create a new transparent CMiX series.

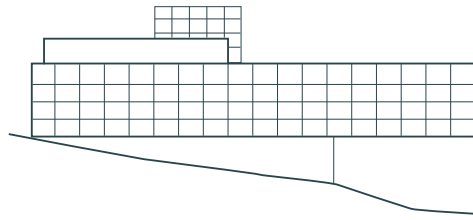


Slip-resistant HD for safety and comfort

A non-abrasive glass surface that achieves anti-slip protection when wet or dry.

Slip-resistant HD is erosion resistant against pool chemicals and is ideal for interior and exterior flooring application, complying with industry anti-slip coating standards.

Exterior



Art Gallery

Guizhou, China

Architect

Turenscape

Glass printing

South Bright China

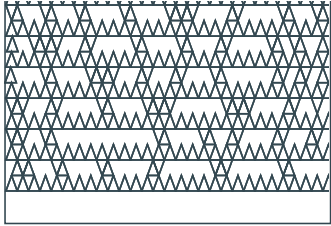
Printed area

4,650 sqm

50,052 sqf

1360 panels





Origami Building

Paris, France

Architect

Manuelle Gautrand

Glass printing

Interpane Sicherheitsglas
GmbH

Printed area

900 sqm,
962 panels

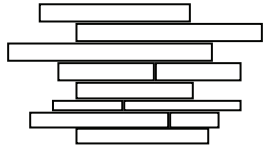
Photographs

Vincent Fillon

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Interior



O'hare International Airport

Chicago, Illinois, USA

Architect

Epstein

Designer

Thirst

Glass printing

Goldray Industries

Printed SQM

350sqm / 3,746 sqf

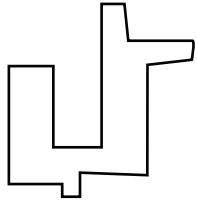
120 panels

Photographs

Steve Hall

Hedrich Blessing





Cumbres Lastarria Hotel

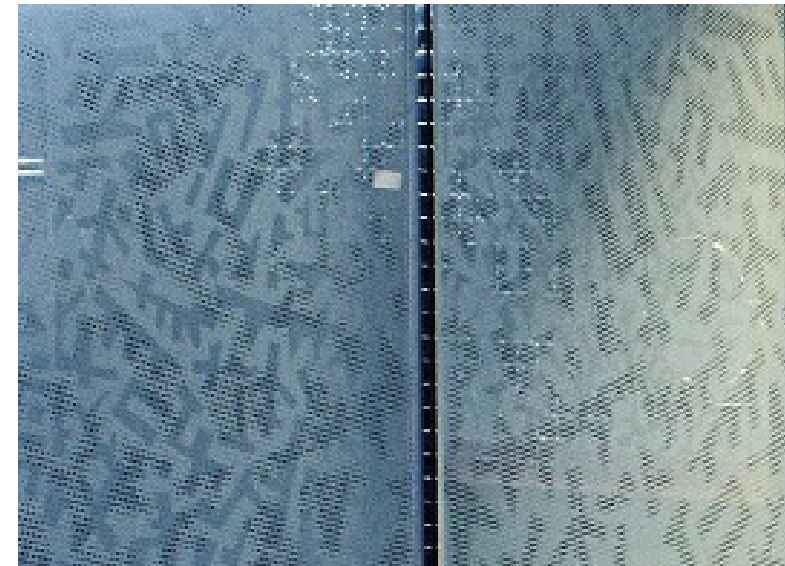
Santiago, Chile

Architect
RE Architectos

Glass printing
Glasstech

Printed SQM
1,200sqm / 12,916 sqf
650 panels

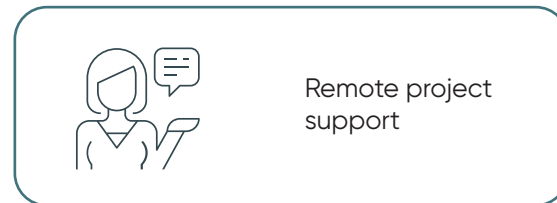
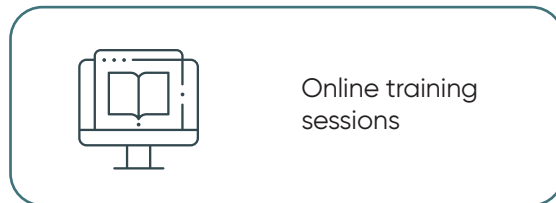
Photographs
Glasstech



Services and support

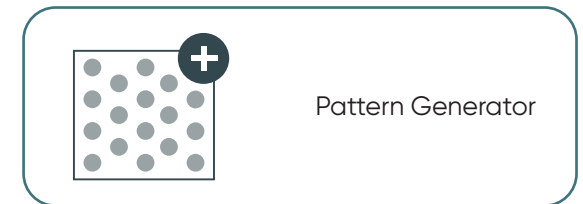
The glass digital printing process can be both challenging and rewarding due to the unique method of mixing colors over a transparent surface. Our dedicated team and expert tools help our customers balance autonomy with support throughout the production process. Our team is available to provide you with extensive knowledge to understand the distinctive factors that will give you optimal results.

Services



Tools

DXP Dip-Tech Expert Pack



Craft your vision with Vibrantz digital inks

Collaborate with our team of experts to develop customized solutions through universal ink options designed for use across myriad applications.

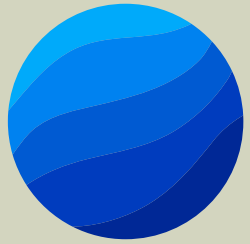
Join us in shaping the future of innovation.

Contact us to learn more about our digital inks portfolio:

Application of inks, design shop and services – graphic.diptech@vibrantz.com

General information and questions – ink.diptech@vibrantz.com





VIBRANTZ
TECHNOLOGIES™

We bring color, performance and vibrancy to life.

Vibrantz Technologies

16945 Northchase Dr. Suite 2000
Houston, Texas 77060

Dip-Tech Inks

5 Atir Yeda St.
Kefar Saba, Israel 4464305

vibrantz.com