



Techniques Chimiques Nouvelles

A Colorful World

# INDUSTRIAL DIP-DYEING SOLUTIONS

Traditional & Additive  
manufacturing

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## Business applications

Understanding the unique needs of every profession, we offer a comprehensive and high-performance range of coloring products tailored for a broad spectrum of industrial applications.

Backed by our expertise, our six dedicated dye ranges are designed to ensure optimal color performance, long-term stability, seamless process integration, and full regulatory compliance.

## Use according to business applications

	GTC Universal liquid dyes	GTD High- performance liquid dyes	TACC Cold liquid dyes	GMP dyeing pastes	COTTON dyeing powders	HORN dyeing pills
3D printing services & productions	✓	✓	✓	-	-	-
Automotive, aeronautic & drones	✓	✓	-	-	-	-
Medtech & orthosis	-	✓	-	-	-	-
Traditional models & prototyping	✓	-	✓	-	-	-
Molding custom creations	✓	-	-	-	-	-
Eyewear & hair accessories	✓	✓	✓	-	-	✓
Garment accessories	-	-	-	✓	✓	✓
Jewelry & watchmaker	✓	-	✓	-	-	-
Events & POP	✓	-	-	-	-	-
Arts, design, unique piece & fashion	✓	-	✓	✓	✓	-

A laboratory setting with a purple tint. In the foreground, a rack of test tubes is visible, with a pipette dispensing liquid into one of them. In the background, there are various pieces of laboratory glassware, including a beaker and a flask. The overall scene is clean and professional, suggesting a scientific or research environment.

# TCN

# 01

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## Presentation

Designer of dyeing preparations and polishing pastes

### + 60 years of expertise !

Techniques Chimiques Nouvelles (TCN) designs and manufactures dyeing preparations and polishing pastes for many industrial sectors.

Our mission is to offer our customers simple, fast and efficient solutions for the coloring of plastic parts, while integrating the principles of eco-design and responsible chemistry.

With its recognized expertise, **TCN relies on French know-how exported internationally.** Our customers, who come from a variety of backgrounds, appreciate the ease of use and technical quality of our products as well as the flexibility of our support.

More than just a supplier, **TCN is a technical partner** that listens to your specific needs and the particularities of your business. We develop tailor-made formulations, combining performance, safety and respect for the environment, to meet the industrial challenges of today and tomorrow.



## Our values

With its recognized expertise, TCN relies on French know-how exported internationally. Our customers, who come from a variety of backgrounds, appreciate the ease of use and technical quality of our products as well as the flexibility of our support.

As a major player in the chemical industry, our CSR policy is increasingly strong and factual.

We integrate social, societal, environmental and economic issues throughout the chain.



# DIP-COLORATION

02

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# DIP-COLORATION

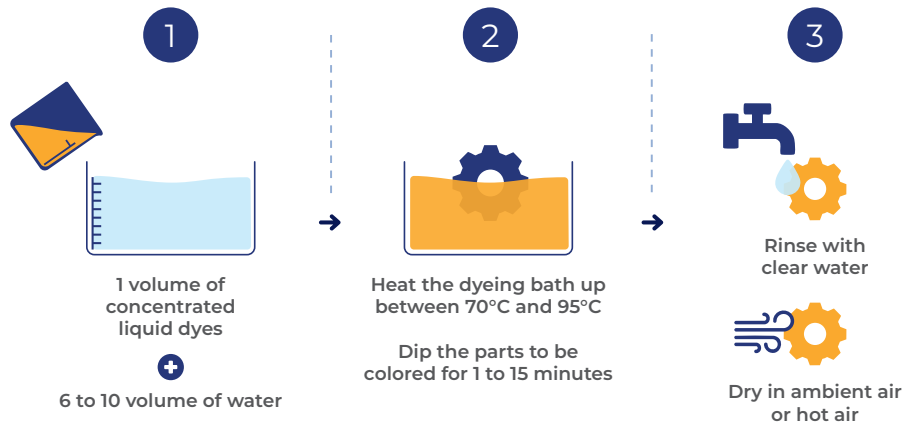
02

## Process Overview

### Our coloring process: A unique know-how!

Our range of coloring products is specially developed to dye a **wide variety of plastic objects**, from single and medium series to decorative objects or technical elements, luxury items, promotional items or specific industrial applications.

The process is simple, fast and efficient : after manufacturing, the parts are immersed in a bath prepared with our dye formulations.



### DATA FOR INFORMATION PURPOSES ONLY

Post-manufacturing coloration is an ideal solution for those looking for a coloring method that is **both high-performance and aesthetically pleasing**, without the constraints typically associated with traditional coatings. It works by penetrating the material itself, without adding any additional layer to the surface.

## Your benefits

### TIME SAVER



Dye parts in less than 10 minutes.

### PRODUCTIVITY GAIN



A process that **reduces production costs**.

### FLEXIBLE USE



An adaptable process for **small and large volumes**.

### OPEN SYSTEM



Our dyes are compatible with **different equipment and technologies**.

### PERFORMANCE



A coloration that meets the **specific requirements** of our customers.

### REPRODUCIBILITY



The consistency of our colors **eases** the production of **serial parts**.

# OUR

# DYEING

# PRODUCTS

# 03

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# OUR DYEING PRODUCTS

03

## GTC Universal liquid dyes

### Presentation

GTC universal liquid dyes are used for the coloring of a wide variety of polymers objects: technical parts, fashion items, promotional items, unique or pre-series parts.

They are available in a wide range of standard colors to meet multiple technical and aesthetic requirements.

An ultra-black is available to guarantee unbeatable depth on parts from additive manufacturing. The high-performance **ultra-black 9093AM GTC** is a benchmark within the range. It is characterized by an exceptional depth on additive manufacturing parts ensuring high UV stability. It is appreciated for its versatility and remains a preferred choice for many applications, both functional and aesthetic.



Designed and manufactured by TCN in our workshop in France

### Main polymers:

Polyamide PA11, PA12 and PA12S / polyamide filled / Polyurethane / Elastomer / Acrylic Polyester / Bio-polymer / TPU / PEEK / ABS / PEI / TR90 Grilamid® / PMMA Plexiglas® / Ultem® / Metal coated / Top-coated items / Composites...

### From technology:

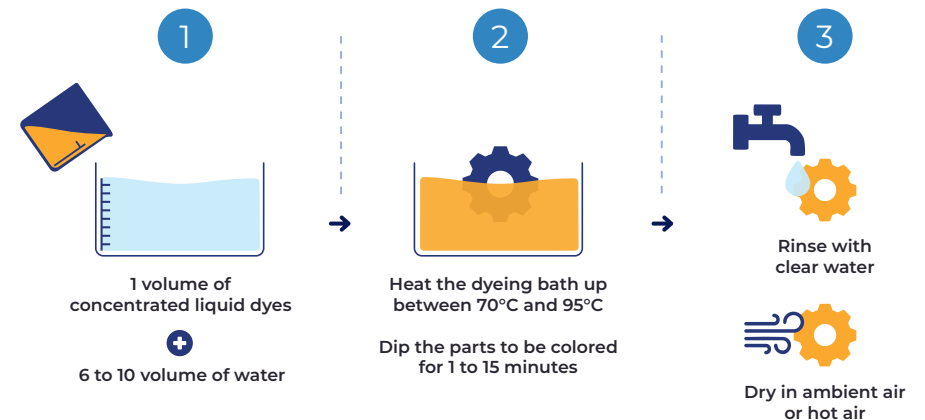
MJF / SLS / SLA / FDM / Injection / CNC / Die-Cutting / Molding / Thermoforming / Thermoplastic pultrusion

**Packaging:** jerrycan of 1L, 5L and 10L



**Storage:** 1 year in the original packaging under normal storage conditions

### Process

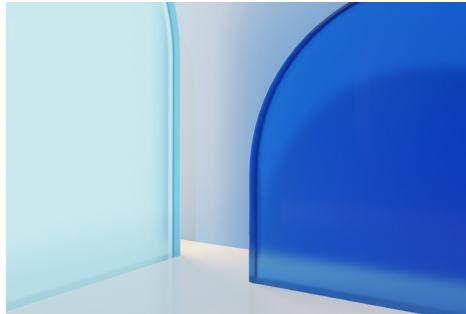


# Applications

Additive manufacturing



Events and POP



Jewelry



Arts



Prototyping



Aerospace



Automotive



Fashion



Sports



Eyewear



Drones



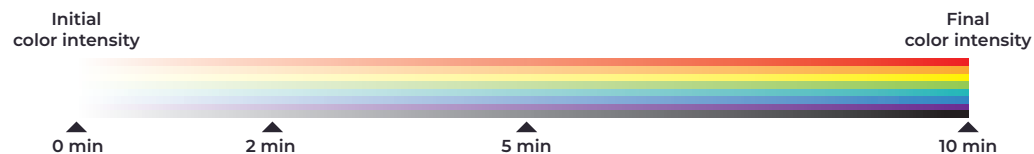
Watchmaker



A versatile solution serving multiple industries....

## Color chart

A range of 29 standard colors is available and all miscible with each other to achieve an infinity of colors.



### Yellow and Orange



**937**  
Fluo yellow



**834**  
Lemon yellow



**8353**  
Golden yellow



**8322**  
Ivory



**5766**  
Blond



**838**  
Brown



**7199**  
Orange

### Pink and Chocolate



**888**  
Pink



**6734**  
Cyclamen



**836**  
Ruby



**1066**  
Violet



**7776**  
Plum



**849**  
Scarlet



**9017**  
Red



**3697**  
Burgundy



**8352**  
Brown



**8323**  
Chocolate

### Cyan and Navy



**7302**  
Cyan



**6654**  
Turquoise



**3672**  
Blue



**3674**  
Royal Blue



**837**  
Navy

### Fluo anise and Black



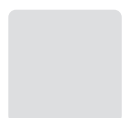
**7382**  
Fluo Anise



**8361**  
Green



**8362**  
Khaki



**8644**  
Grey



**8547**  
Grey



**8211C**  
Black



**9093AM**  
Ultra Black

Pure colors in bold font

The perception of the colors presented in this color chart may vary from the actual hues.

## Compliance & Certifications



### SUBSTANCES OF CONCERN

- ▶ FREE FROM SUBSTANCES CLASSIFIED AS CMR, SVHC, ED, PBT/vPvB AND PMT/vPvM.  
*Compliant with REACH regulation*



### BIOCOMPATIBILITY

#### Cytotoxicity

- ▶ ISO 10993-5 & ISO 10993-12 (XTT Method)  
*Certificate number: CYTOTOX-PH-25/0773 by Groupe ICARE  
On PA12S parts dyed with Ultra black 9093AM GTC*



#### Irritation

- ▶ ISO 10993-23 & OECD 439  
*Certificate number: HSMIiso-PH-25/0773 by Groupe ICARE  
On PA12S parts dyed with Ultra black 9093AM GTC*

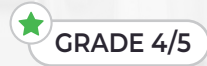
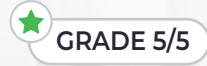


### COLOUR FASTNESS

- ▶ NF EN ISO 11507 PAINTS AND VARNISHES TO UV LIGHT GREY @ 500H

*Certificate number: ERO031736-1 by Element Material Technology Amsterdam / On PA12 parts dyed with black 8211C GTC + anti UV 8630*

*Certificate number: ERO031736-1 by Element Material Technology Amsterdam / On PA12 parts dyed with black 8211C GTC*



### OEKO-TEX® CLASS I-IV

- ▶ CONFORM TO THE OEKO-TEX® STANDARD 100  
*Our dyes do not contain any harmful substances as identified by the Oeko-Tex® Standard, when used under the intended conditions.*



### RoHS DIRECTIVE

- ▶ RoHS DIRECTIVE 2011/05/EU AND (EU)2015/863 - (AMENDMENT IN ANNEX II)  
*Certificate number: AR-21-SV-011480-01 by EUROFINs  
On PA12 parts dyed with black 8211C GTC*

This tests have been performed by accredited independant laboratories according iso standard. They do not guarantee the conformity of your finished product, which is depending of your raw plastic material, process and use. The labellisation have to be made to an accretited laboratory.

# GTD High-performance liquid dyes

## Presentation

GTD high-performance liquid dyes are used for the coloring of a wide variety of laser additive manufacturing parts that require high solidity.

GTD high-performance concentrated dyes are specifically designed for the coloration of laser-sintered parts requiring high fastness properties.

Building on the well-established qualities of GTC universal concentrated dyes, the GTD range offers an **exceptionally high resistance to UV exposure and migration**. These outstanding performances make GTD dyes particularly suitable for demanding application fields, where both technical and aesthetic requirements are critical.

GTD dyes are available in a wide range of standard colors, allowing them to meet diverse functional and visual specifications.

In addition, one reference within the range is approved for food contact. When used in accordance with our specifications, the dyed parts comply with European Regulation (EU) No. 10/2011.



Designed and manufactured by TCN in our workshop in France

**Main polymers:**  
Polyamide filled / Polyamide / TPU

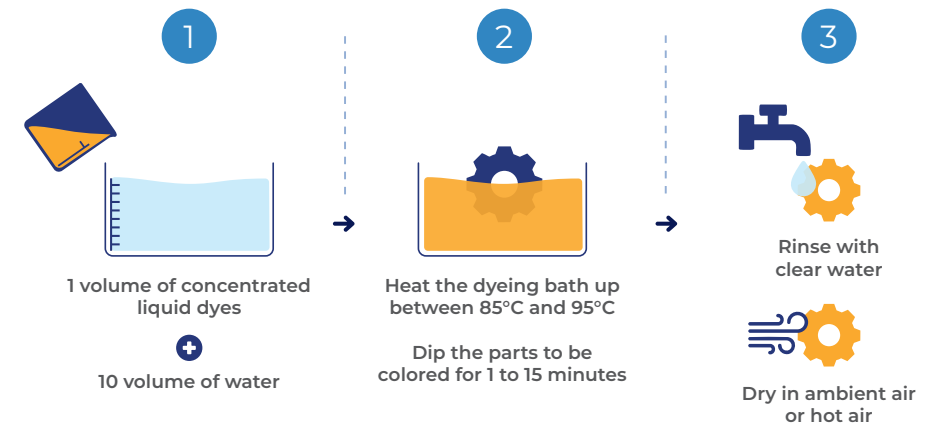
**From technology:**  
MJF / SLS

**Packaging:** jerrycan of 1L, 5L and 10L



**Storage:** 1 year in the original packaging under normal storage conditions

## Process



## Applications

### Orthosis



### Boating



### Eyewear



### Food industry



### Additive manufacturing



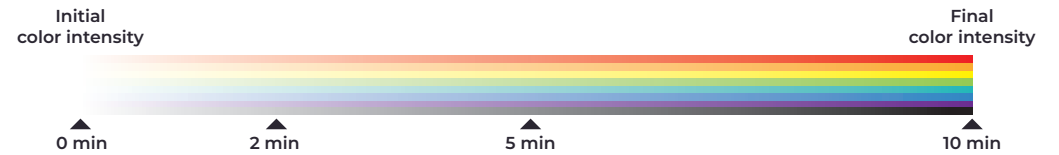
### Automotive



A versatile solution serving multiple industries...

## Color chart

A range of 19 standard colors is available and all miscible with each other to achieve an infinity of colors.



### Yellow to Burgundy



**8471**  
Yellow



8645  
Orange



**8473**  
Scarlet



9015  
Red



8475  
Burgundy

### Plum and navy



8476  
Plum



**8889**  
Blue  
(food contact)



**8477**  
Blue



8486  
Royal blue



8478  
Navy

### Green and ivory



9130  
Green



8479  
Green



9077 V2  
Khaki



8916 V2  
Ivory

### Brown and black



8482  
Brown



8483  
Chocolate



8489 V2  
Light grey



8484  
Grey



**8485**  
Black

### Pure colors in bold font

The perception of the colors presented in this color chart may vary from the actual hues.

## Compliance & Certifications



### SUBSTANCES OF CONCERN

- ▶ FREE FROM SUBSTANCES CLASSIFIED AS CMR, SVHC, ED, PBT/vPvB AND PMT/vPvM.  
*Compliant with REACH regulation*

CONFORM



### COLOUR FASTNESS

- ▶ **NF EN ISO 105-C06 06-2010**  
TO DOMESTIC AND COMMERCIAL LAUNDERING
- ▶ **NF EN ISO 105 E04:2013-06**  
TO PERSPIRATION
- ▶ **NF EN ISO 105 X12 09-2016**  
TO RUBBING  
*Certificate number : 120-0853/1 by SMT Laboratory France  
On PA12 parts dyed with blue 8889 GTD*
- ▶ **NF EN ISO 11507 PAINTS AND VARNISHES**  
TO UV LIGHT AT 500H  
*Certificate number: ERO031736-1 by Element Material Technology Amsterdam  
On PA12 parts dyed with black 8485 GTD*

CHANGE 4/5

CHANGE 4/5

DRY 4/5 WET 4/5

GRADE 5/5



### FOOD CONTACT

*Certificate number : 120-0853/1 by SMT Laboratory France  
On PA12 parts dyed with blue 8889 GTD*

- ▶ **NF EN 13130**  
SPECIFIC MIGRATION OF PRIMARY AROMATIC AMINES  
IN PLASTIC MATERIAL
- ▶ **NF EN 1186-2&8**  
OVERALL MIGRATION INTO OLIVE OIL
- ▶ **NF EN ISO 1186 01-2003**  
OVERALL MIGRATION INTO FOOD SIMULANTS

NO MIGRATION

NO MIGRATION

NO MIGRATION



### STANDARD TOYS

- ▶ **NF EN 71-3+A3/06-2018**  
MIGRATION OF ELEMENTS IN PLASTIC MATERIAL.  
Al, Sb, As, BA, Cd, Cr, CrVI, Co, Cu, Pb, Mn, Cu, Pb, Mn, Hg, Ni, Se, Sr, Sn, Zn  
*Certificate number: 120-0853/1 by SMT Laboratory France  
On PA12 parts with black 8485 GTD*

NO MIGRATION



### BIOCOMPATIBILITY

- ▶ **NF EN ISO 10993-5/2010, NF EN ISO 10993-12/2012**  
BIOLOGICAL EVALUATION OF MEDICAL DEVICES  
PART 5 : TESTS FOR IN VITRO CYTOTOXICITY.  
*Certificate number: 120-0853/1 by SMT Laboratory France  
On PA12 parts with black 8485 GTD*

NO CYTOTOXIC



### RoHS DIRECTIVE

- ▶ **NF EN ISO 10993-5/2010, NF EN ISO 10993-12/2012**  
RoHS DIRECTIVE 2011/05/EU AND (EU)2015/863 - (AMENDMENT IN ANNEX II)  
*Certificate number: AR-21-SV-011480-01 by EUROFINIS  
On PA12 parts dyed with black 8211C GTC*

This tests have been performed by accredited independant laboratories according iso standard. They do not guarantee the conformity of your finished product, which is depending of your raw plastic material, process and use. The labellisation have to be made to an accretited laboratory.

# TACC Cold liquid dyes

## Presentation

TACC Cold liquid dyes provide a cold-coloring solution for materials prone to thermal deformation.

### Main polymers:

Cellulose acetate / Bio-acetate / SLA resins / ...

### From technology:

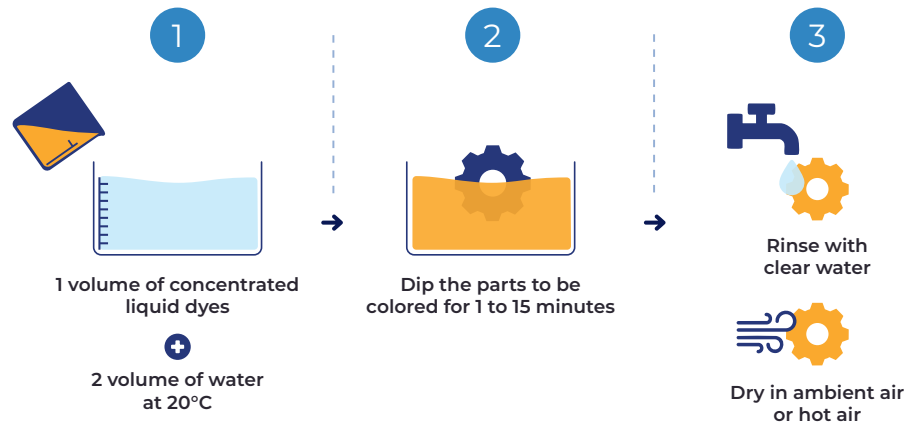
CNC / Die-Cutting / Molding / SLA

**Packaging:** jerrycan of 1L, 5L and 10L



Storage: 1 year in the original packaging under normal storage conditions

## Process



## Applications

### Eyewear



### Hair ornaments



### Fashion accessories



### Combs



### Dices, pawns, tokens



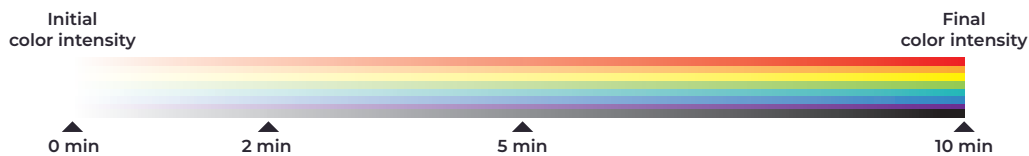
### Jewelry



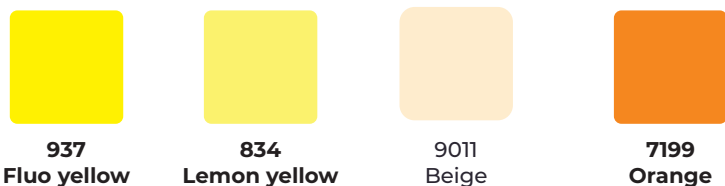
A versatile solution serving multiple industries...

## Color chart

A range of 24 standard colors is available and all miscible with each other to achieve an infinity of colors.



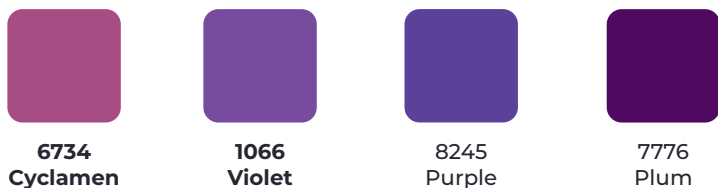
### Yellow and orange



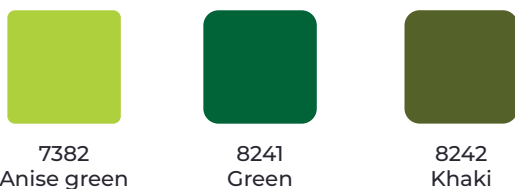
### Red and Pink



### Purple



### Green

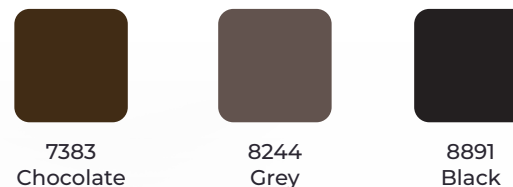


Pure colors in bold font

### Blue



### Brown and black



The perception of the colors presented in this color chart may vary from the actual hues.

## Compliance & Certifications



### SUBSTANCES OF CONCERN

- ▶ FREE FROM SUBSTANCES CLASSIFIED AS CMR, SVHC, ED, PBT/vPvB AND PMT/vPvM.  
*Compliant with REACH regulation*



### UV RESISTANCE

Shades on the gray scale	2/3	3 moderate contrast	3/4	4 slight contrast	4/5	5 no contrast
Degree of degradation observed after exposure						X

Certificate number: 14-06-6344-076 by ALUTEC  
On cellulose acetate parts dyed with TACC



# GMP dyeing pastes

## Presentation

GMP dyeing pastes are formulated specifically for industrial button dyeing applications. They are suitable for the coloration of plastic-based garments and fashion accessories, ensuring reliable and reproducible dyeing results.

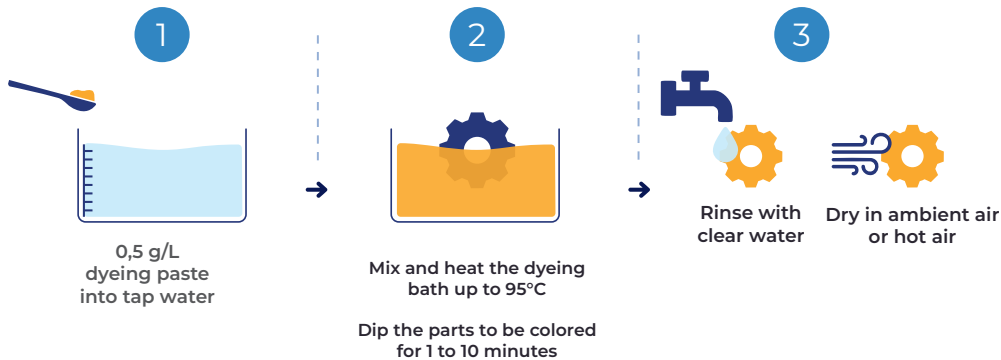
The colors obtained exhibit outstanding uniformity, durability, and resistance to washing, abrasion, and light, meeting the quality requirements of industrial manufacturing processes.

**Main polymers:**  
Polyester / Bio-polyester /  
Recycled-polyester

**Packaging:**  
plastic box of 1Kg



## Process

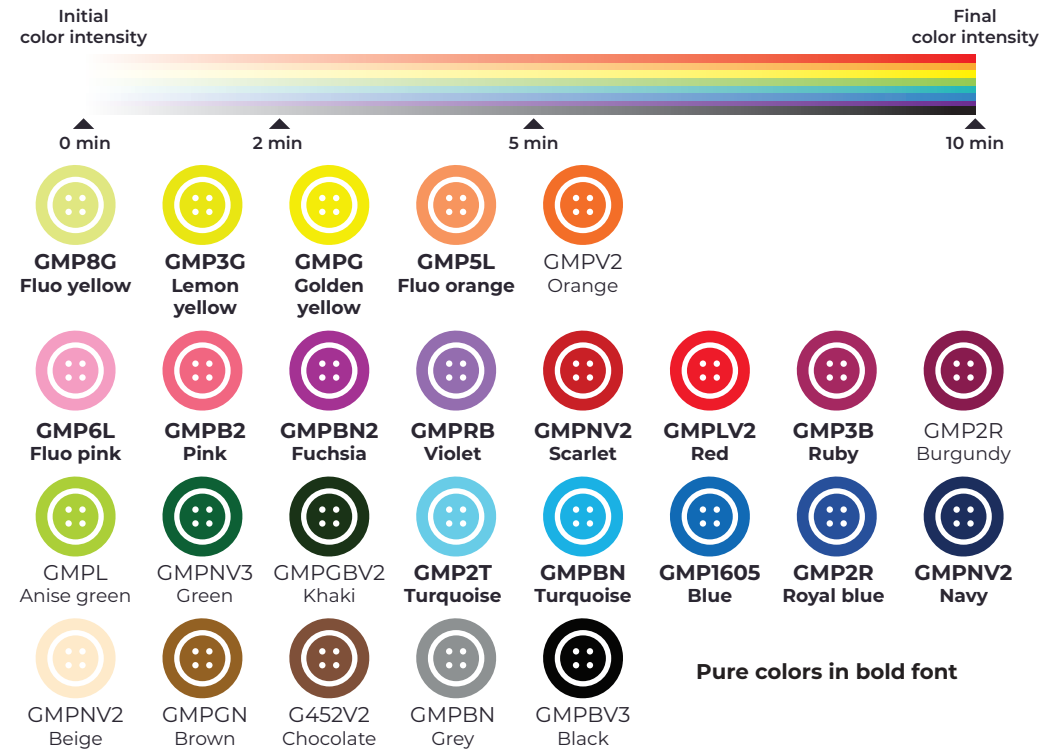


## Applications



## Color chart

A range of 26 standard colors is available and all miscible with each other to achieve an infinity of colors.



The perception of the colors presented in this color chart may vary from the actual hues.

## Compliance & Certifications



### SUBSTANCES OF CONCERN

- ▶ FREE FROM SUBSTANCES CLASSIFIED AS CMR, SVHC, ED, PBT/vPvB AND PMT/vPvM.  
*Compliant with REACH regulation*



### OEKO-TEX® CLASS I-IV

- ▶ CONFORM TO THE OEKO-TEX® STANDARD 100  
Our dyes do not contain any harmful substances as identified by the Oeko-Tex® Standard, when used under the intended conditions.

# COTTON dyeing powders

## Presentation

Our **COTTON dyes** are specifically developed for the coloration of plant-based fibers, particularly cotton and corozo.

Easy to process, these dyeing powders **bond directly to the fiber** without the need for additional dyeing auxiliaries in the bath.

### Main materials:

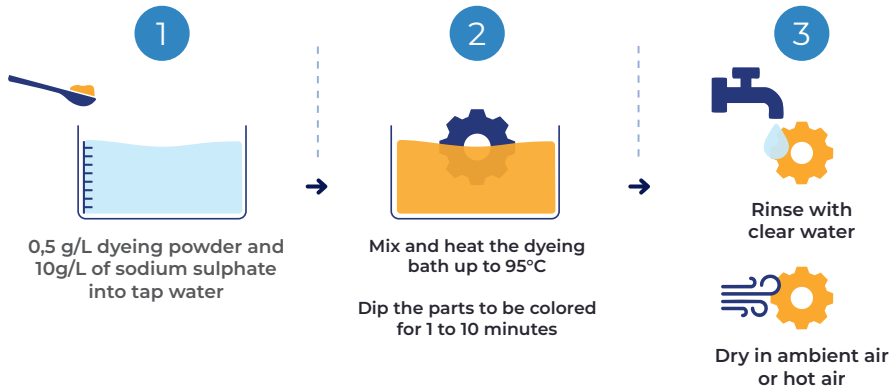
Corozo / Cotton / Coco / Linen

### Packaging:

plastic box of 500g



## Process

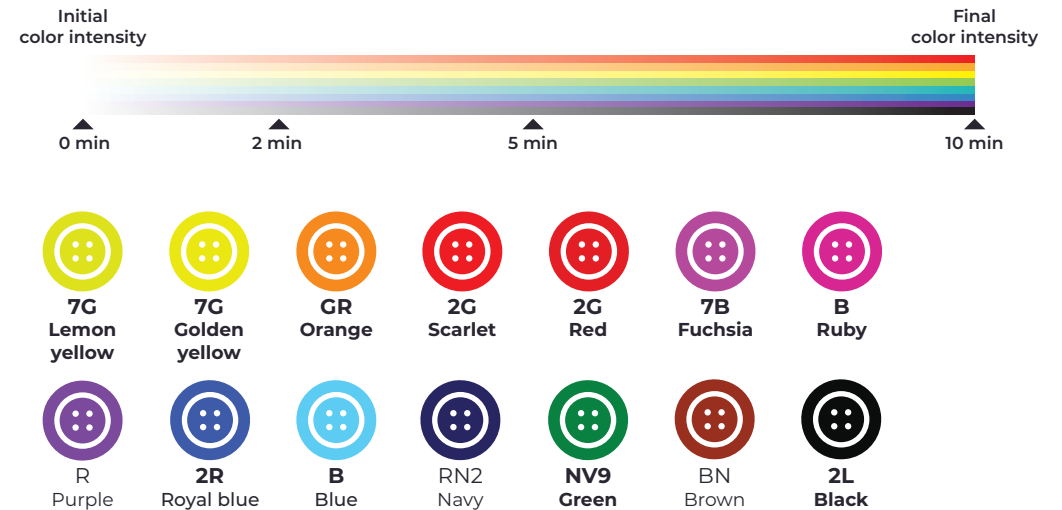


## Applications



## Color chart

A range of 14 standard colors is available and all miscible with each other to achieve an infinity of colors.



### Pure colors in bold font

The perception of the colors presented in this color chart may vary from the actual hues.

## Compliance & Certifications



### SUBSTANCES OF CONCERN

- ▶ FREE FROM SUBSTANCES CLASSIFIED AS CMR, SVHC, ED, PBT/vPvB AND PMT/vPvM.  
*Compliant with REACH regulation*



### OEKO-TEX® CLASS I-IV

- ▶ CONFORM TO THE OEKO-TEX® STANDARD 100  
*Our dyes do not contain any harmful substances as identified by the Oeko-Tex® Standard, when used under the intended conditions.*

# HORN dyeing pills

## Presentation

Our **HORN dyeing pills** are specially developed for the dyeing of natural animal horns.

Genuine horn is one of the oldest materials used in the manufacture of eyeglass frames and buttons. The horn comes in many shades from blond to brown.

Special colours can be obtained by dyeing to highlight its veins and shades and make it a high-quality item.

Easy to process, these dyeing powders attach directly to the fiber without the need to add dyeing aids to the bath.

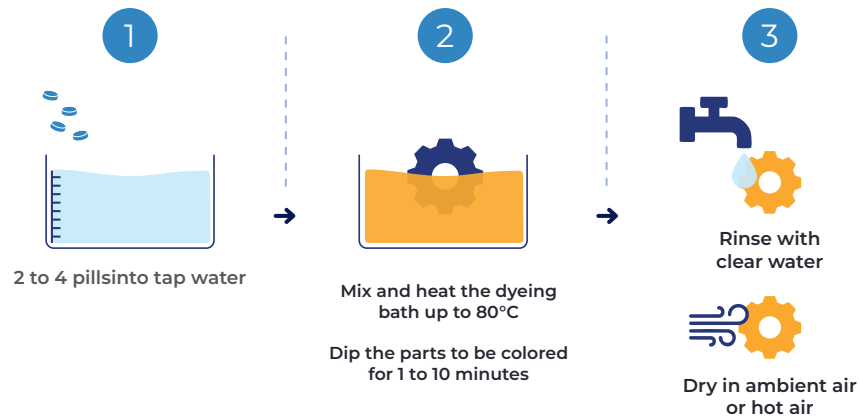
### Main materials:

Horn

Packaging:  
pills of 0.25g



## Process

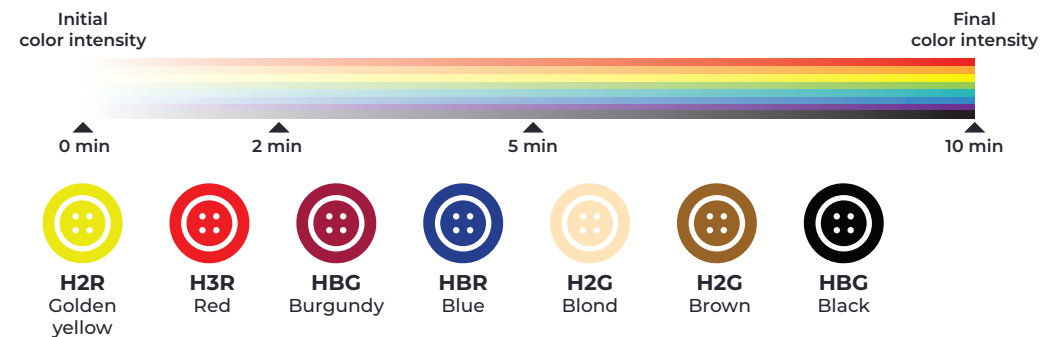


## Applications



## Color chart

A range of 7 standard colors is available and all miscible with each other to achieve an infinity of colors.



The perception of the colors presented in this color chart may vary from the actual hues.

## Compliance & Certifications



**SUBSTANCES OF CONCERN**

► FREE FROM SUBSTANCES CLASSIFIED AS CMR, SVHC, ED, PBT/vPvB AND PMT/vPvM.  
*Compliant with REACH regulation*



# RELATED

# PRODUCTS

04

UV resistance treatment	42
Cleaner for equipment	43
Discolorants	43
Whitener	43

# RELATED PRODUCTS

04

Our range covers all the essentials for the process : anti-UV, discolorant, technical cleaners, etc.

**Packaging:** jerrycan of 1L, 5L and 10L

**Storage:** 1 year in the original packaging under normal storage conditions

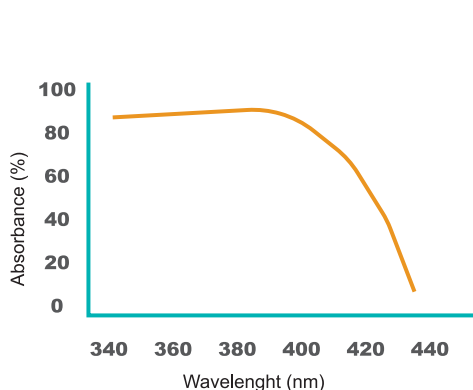
## UV resistance treatment

**8630LC Anti-UV** is an additive which enhances the light fastness of dyed plastic parts. Weathered by the direct or indirect impact of ultraviolet radiations, the fading occurs undeniably.

Light fastness of plastic parts depends on different parameters : property of the dye itself, plastic material, exposure source and period.

**Process:** Add 5ml to 10 ml of 8630LC Anti-UV in 1 liter of water, heat at 90°C. Dip your pieces to be treated for a few minutes and dip-dyed.

**Your benefits:** The treatment allows an increase of 1 to 3 points on the grey scale.



UV TEST ACCORDING TO ISO11507  
500h of exposure

	Initial Shade	Shade after 500h	Grey Scale
Untreated part	●	●	2
Treated part	●	●	5

The **8630LC Anti-UV** (technical bulletin n° 20CO 39) is an additive that consequently increases the UV light resistance of tinted pieces.



## Cleaner for equipment

**7520B cleaner** is suitable for an effective cleaning of utensils and containers. It guarantees the elimination of organic residues and guarantees a high level of propriety for the re-use of equipment for the following colours.

**Process:** Dilute at 100 mL/L of **Cleaner 7520B** with hot water, leave on for a few minutes. Rub and rinse.

## Discolorants

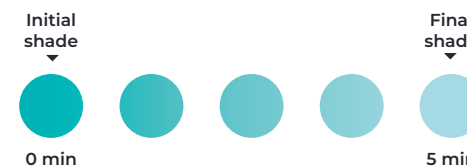
Our discolorants are specially formulated to correct shades obtained by non-conforming shades by effectively reducing the intensity of the initial color. They allow for immediate and homogeneous recoloration.

### 8050 discolorant: GTC dyed parts

**Process:** Dilute at 50 to 200 mL/L with water, heat up at 60°C to 90°C. Leave on until necessary and rinse with water.

#### Example:

PA12 discolored parts :  
100ml/L of 8050 discolorant at 90°C



### 8280 TACC discolorant: TACC dyed parts

**Process:** Pure or diluted with water, at room temperature. Leave on until necessary and rinse with water.

## Whitener

**Whitener 8430B PA** is designed to effectively lighten yellowing of polyamide parts. It acts optically by neutralizing unwanted yellow hues and enhancing the brightness of the material, resulting in a clear and homogeneous appearance.

Since the achievement of ultra-bright shades is conditioned by the base shade of the material, pre-treatment with the whitener makes it possible to neutralize unwanted tones and optimize the color base.

**Process:** Dilute at 50 to 200 mL/L with water, heat up at 90°C. Leave on until necessary and rinse with water.

# THE

# COMBINATION

# OF COLORS

# 05

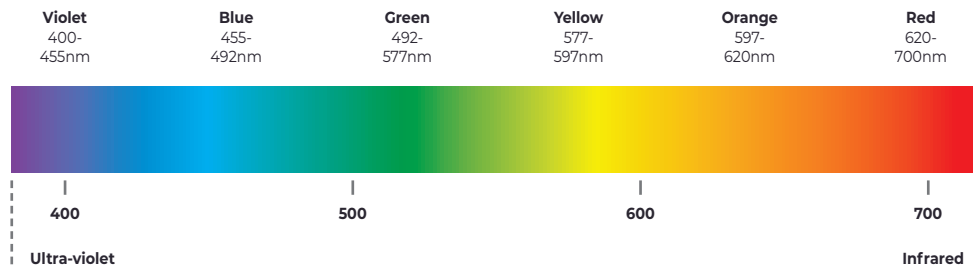
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# THE COMBINATION OF COLORS

05

Color is a manifestation of light according to the electromagnetic spectrum visible to the human eye. The whole of the visible spectrum can be demonstrated by its dispersion, possible by means of a prism, a lens or a diopter.

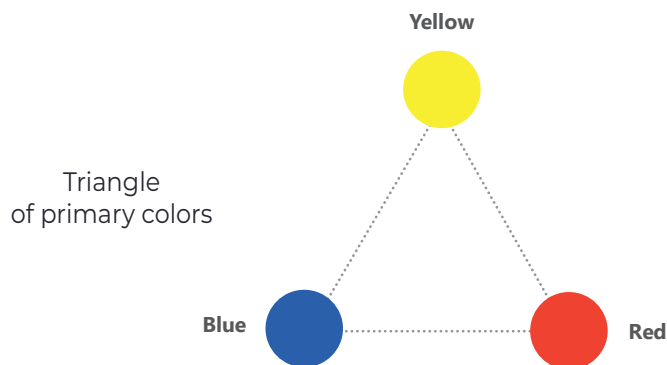
Many color representations of the rainbow indicate 6 colors. The 3 primary colors, blue, yellow and red can generate the other colors.



## Primary colors

A primary color, also called elemental color, is a color that can not be created by mixing other colors. These primary colors, mixed together, make it possible to obtain the other colors of the visible spectrum.

For a better visualization, many theorists presented the primary colors at the angles of an equilateral triangle.



## Secondary colors

When 2 primary colors are mixed in equal parts, a secondary color is obtained.

**Orange** is the secondary color from the blend of the yellow and red primary.



**Violet** is the secondary color from the blend of the red and blue primaries.

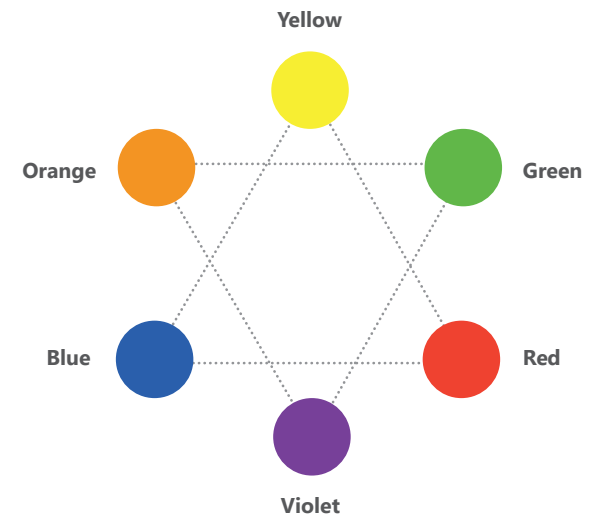


**Green** is the secondary color from the mixture of the blue and yellow primary.



For the representation of the secondary colors, we take back our triangle of the primary colors by superimposing the same basic triangle, but inverted, by indicating at its angles the secondary colors.

When one adds a little bit of the third primary color to a secondary color, it is said that the tone is broken, it becomes tertiary.

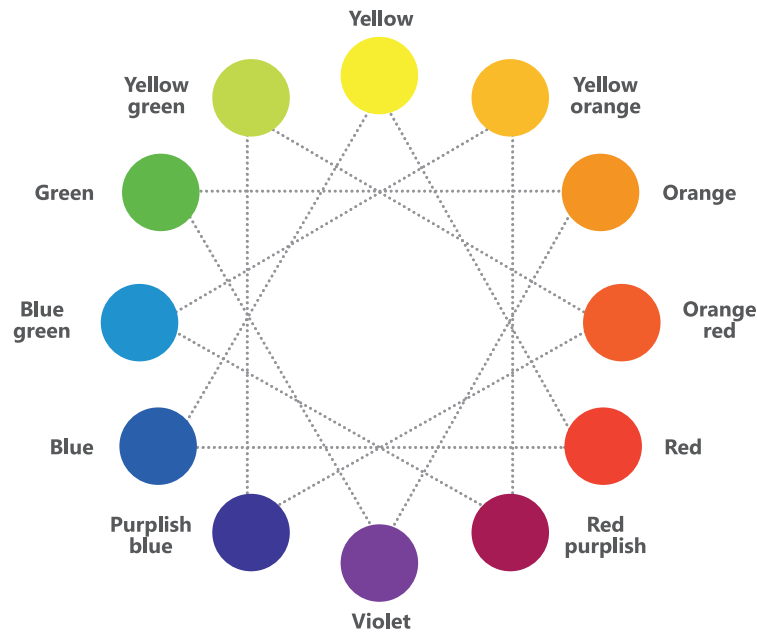


## Tertiary colors

A tertiary color results from mixing at least 3 primary colors.

A color obtained by a mixture of bright colors is always duller than that which composes it.

If we trace a straight line connecting 2 chromatic opposites such as red and green, this line passes through the central theoretical black.



## Define a color

The Pantone® and RAL color charts are global references for color. Communicating using Pantone® or RAL numbers makes it possible to visualize the requested shade.

There are other color coding systems (RGB red, green, blue, HSL hue, saturation, lightness).



## Choice of primary colors

In practice, TCN can not simply propose the 3 basic colors of blue, yellow and red to achieve the wide color panel of its customers.

The mixture of colors systematically causes a loss of the vivacity of the final shade.

Depending on the desired color, we will have to work with intermediate colors as lemon yellow and golden yellow, pure orange, pink, fuchsia, scarlet and red, purple, royal blue, turquoise, green in order to reach bright colors.

Our range of dyeing products includes essential basic colors to get bright tones and to be combined each others. The wide range allow to easily get tertiary colors.





**POST-COLORATION**

**TREATMENTS**

06

Brightening  
Impregnation

52

52

# POST-COLORATION TREATMENTS

06

## Brightening

Ideal for final operations and after dip-dyeing process, our **BS9070 brightening paste** adds a touch of perfection in just a few hours by **dry-berreling**, providing luster and depth to the pieces, while offering durable protection and a superior appearance.



## Impregnation

**PROOF AM 9267** is a ready-to-use impregnating agent aerosol designed to seal the internal porosity of 3D printed parts.

It is used to stabilize dyed parts, ensuring optimal and long-lasting resistance to mechanical, thermal, or chemical stresses

### Main applications:

3D printed parts  
SLS, MJF, SLA, FDM, ABS, PMMA, resins

### Technical characteristics:

- Slight satin effect
- Low viscosity
- Colourless
- Contains acrylic binders
- Cures at room temperature

For those looking to enhance surface quality and durability of additive manufacturing parts

### Technical characteristics:

- Stabilizes the surface
- Reinforces the performance of high-end parts
- Reduces capillary absorption
- Protects against dirt and moisture
- Strengthens the hue
- Does not alter the satin aesthetic appearance
- Good penetration into fine porosities



## Post-Processing Workflow for 3D Printed Frames



# EQUIPMENT

A wire mesh basket filled with small, light-colored objects, possibly seeds or small pieces of equipment, set against a dark background with an orange overlay. The basket is positioned in the center-right of the frame, and the objects inside are scattered across its surface. The overall lighting is dim, with a strong orange glow from the bottom-left corner.

07

# EQUIPMENT

07

A simple, flexible, and high-performance coloration process.

Designed for immediate use without any special equipment, our liquid dyes are suitable for both open-bath applications and equipped industrial processes, meeting the full range of production requirements.

## Italy

**Teknox**  
THE POWER OF WATER

**NORBLAST**



## USA

**ORYX**



## Germany

**XIONEER**



# OUR

# SERVICES

# 08



## **International Delivery & Tailored Packaging**

Worldwide shipping with packaging designed to fit your logistical and operational requirements. Whether small batches or large-scale orders, we ensure safe, reliable delivery with solutions tailored to your supply chain.



## **Personalized Consulting & Technical Support**

Tailored guidance and hands-on support at every stage of your project. Our experts work closely with you to optimize processes, troubleshoot challenges, and ensure your objectives are met efficiently.



## **Custom Color Development**

Bespoke color solutions created to match your exact specifications and application requirements. From concept to final production, we deliver precise, reproducible colors that enhance your product's value and appeal.



## **Strict confidentiality of projects and client references**

From the very first contact, our teams apply high standards of confidentiality and handle each request in accordance with the best practices typically associated with Non-Disclosure Agreements (NDAs), whether a formal agreement has been signed or not. With over 60 years of experience operating exclusively in B2B, our teams are trained to strictly respect professional confidentiality and to manage sensitive information with the utmost care.

# FAQ

## 09

### PROCESS & TECHNICAL PERFORMANCE

#### 01 - Will the coloration distort my piece?

Our dyes do not alter the physical properties of the parts. For thinner parts, avoid temperatures above 80°C.

#### 02 - Does the color bleed?

Colors do not disgorge because our dyes penetrate the material. Our dyes do not need fixators. However, a rinsing step is important for achieving a consistent and long-lasting result.

#### 03 - Is the product dangerous?

Our products comply with European regulations and are not dangerous because they comply with the rules of use recommended for chemicals and follow the instructions mentioned in their SDS.

#### 04 - The color I got on my part is not the expected one?

The final result depends on the dyeing parameters and the material itself. However, you can partially discolor the part with our discolorant product.

#### 05 - How long can I keep the product in storage?

Our products are guaranteed without any shade diversion for a period of 1 year under the usual storage conditions.

#### 06 - Do you deliver anywhere in the world?

Our products are sold out from FCA Grigny (ICC2020), however, we can ship your orders worldwide through our usual shipping providers or according to your needs.

#### 07 - Is dyeing compatible with other post-processing steps?

In most cases, to ensure a consistent finish, the dyeing process should be preceded by sandblasting. Shot peening can then be applied after dyeing to adjust surface gloss. Chemical polishing may be performed before or after coloring, either to protect the solvent from dye contamination or to achieve a more uniform final color.

#### 08 - After use, how should equipment be cleaned and dye baths recycled?

Stainless steel equipment can be cleaned using our 7520B cleaner (see p.35). Used dye baths must be collected and handled by an approved waste management organization, in accordance with local regulations.

#### 09 - How can I ensure color repeatability?

Strict control of production batches is implemented, with a color tolerance of  $\Delta E < 5$ . Combined with a simple and well-defined operating process, this ensures consistent color reproduction from one batch to the next.

## COLOR CONTROL & QUALITY ASSURANCE

### 8. How does TCN guarantee color quality and consistency?

Strict batch control is implemented with a color tolerance of  $\Delta E < 5$ . Internal quality procedures include colorimetric measurements, aging tests, and performance validation. TCN operates under ISO 9001 and ISO 14001 certifications, ensuring both quality management and environmental compliance.

### 9. The color obtained is not the expected one. What can be done?

The final shade depends on both material properties and dyeing parameters. If necessary, partial bleaching can be carried out using a dedicated discolorant solution 8050 in order to adjust the final result.

## SAFETY, STORAGE & REGULATORY COMPLIANCE

### 10. Are the products dangerous?

The products comply with European chemical regulations and are safe when used in accordance with recommended handling conditions. Users must always follow the instructions provided in the Safety Data Sheets. Certificates and regulatory documentation are available upon request.

### 11. Do I need specific equipment to handle the products?

The products do not require complex installations, but standard laboratory safety precautions are recommended. Proper ventilation, gloves, glasses and protective clothing should be used to ensure safe handling, as detailed in the Safety Data Sheets.

### 12. What are the storage conditions?

Products must be stored under standard conditions at a temperature not lower than 5°C in order to maintain stability and performance. Under proper storage conditions, products are guaranteed without shade deviation for one year.

### 13. After use, how should equipment be cleaned and dye baths managed?

Stainless steel equipment can be cleaned using our 7520B cleaner. Used dye baths must be collected and handled by an approved waste management organization in accordance with local environmental regulations.

## INDUSTRIAL INTEGRATION & OPTIMIZATION

### 14. How easily can dip dyeing be integrated into an industrial environment?

The solutions are designed for integration into both automated and semi-automated industrial lines as well as workshop environments. The process typically requires a temperature-controlled tank, a heating system depending on the product range, and an agitation system to maintain bath homogeneity. Accurate dosing, stable bath management, and proper dilution control allow optimization of material costs and ensure industrial efficiency.

### 15. Do you support customers throughout their projects?

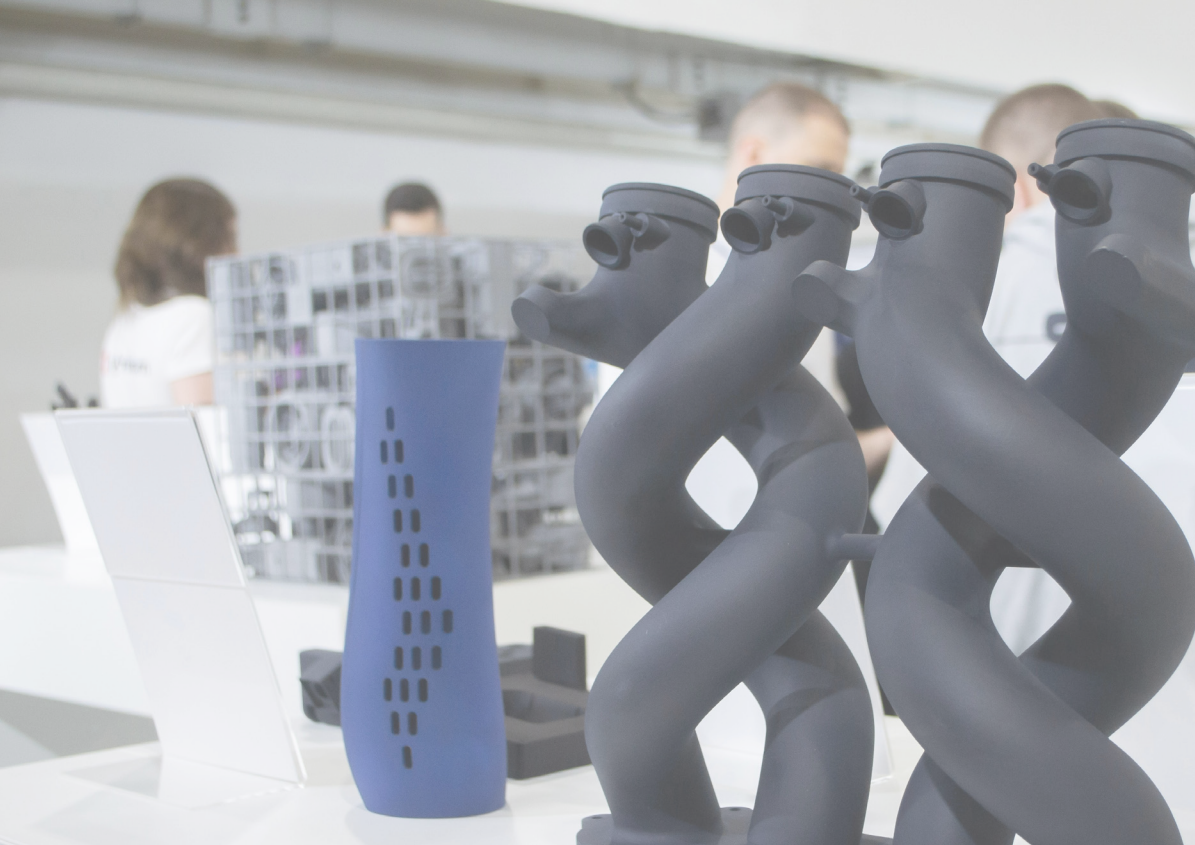
Yes, TCN accompanies customers from the early development phase through to full industrial production. Technical support is provided at every stage of the project, and dedicated webinars can be organized to ensure proper understanding and implementation of the dyeing process.

## ORDERING & LOGISTICS

### 16. How are orders, deliveries, and samples managed?

Orders must be sent by email to [office@color-tcn.com](mailto:office@color-tcn.com) and are validated after acceptance of the quotation and the General Terms and Conditions of Sale by the customer. The minimum order amount, excluding tax and transport costs, is €150, and a management fee of €50 applies for orders between €150 and €250.

Lead times depend on product availability and order volume and are specified in the quotation or order confirmation. Urgent requests are evaluated according to stock and production planning. Products are sold FCA Grigny (ICC 2020) and can be shipped worldwide. Upon request, samples may exceptionally be provided without minimum order requirements for a first test order, depending on project scope.



**TCN**

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