



DYES

COLORATION BY DIPPING OF PLASTIC MATERIALS

BK24 COLO-GTC/GTD

Version 1

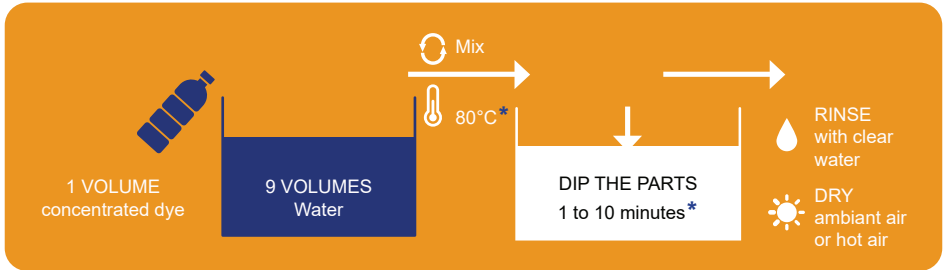
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DYEING PROCESS

Our **GTC and GTD concentrated dyes** offer an easy process, suitable for a multitude of uses. In liquid form and easily diluted with water, our coloring products allow to dye by soaking, in just a few minutes, most plastics.



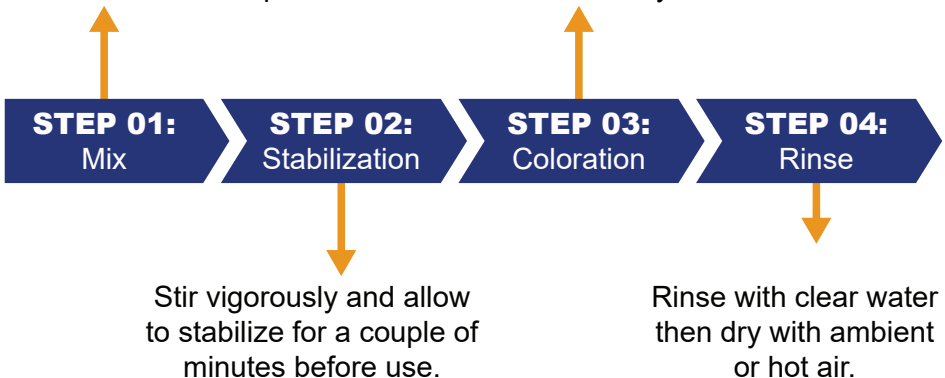
*Data given as an example

- Quick and simple process to color in a single operation, one or multiple parts.
- Coloration of small parts, of various shapes, regardless of their geometry.
- Completion assured directly to the post-fabrication of the part.

DYE PROCESS

Mix 1 volume of GTC or GTD with the recommended volume of water and heat up the bath.

Dip the items in the heated bath, for 1 to 15 minutes depending on the intensity of the desired color.



GTC universal liquid dyes

The **GTC universal liquid dyes** are used to color a huge variety of items in plastic materials:

- Technical parts
- Fashion items
- Advertising materials
- Single piece or pre-series

They are designed to bring color to finished and previously polished parts.

Most of plastic materials:

Polyamide

Polyurethane

Elastomer

Acrylic

Polyester

TPU

PEEK

ABS

PEI

TR90 Grilamid®

PMMA

ULTEEM

Derived from most technologies:

SLS

SLA

FDM

MJF

Injection

Molding

GTD high-performance concentrated liquid dyes

GTD high-performance concentrated dyes are suitable for the coloration of laser additive manufacturing parts that require high solidity.

They meet a wide range of needs and find their use in particularly demanding areas such as automotive, aeronautics, eyewear, prostheses...

For technical uses :

Polyamide

PA11

PA12

Filled Polyamide

Acrylic

ADVANTAGES

TIME SAVER



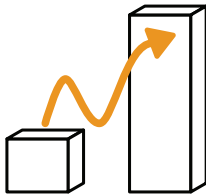
Dye parts in **less than 10 minutes**.

PRODUCTIVITY GAIN



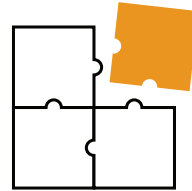
A process that **reduces production costs**.

FLEXIBLE USE



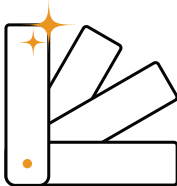
An adaptable process for **small and large volumes**.

OPEN SYSTEM



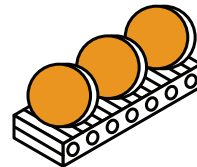
Our dyes are compatible with **different equipment and technologies**.

PERFORMANCE



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

REPRODUCIBILITY



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

CERTIFICATES & LABELS

DYES DURABILITY

Coloration remains stable on plastics without degrading in the following situations:

NF EN ISO
105-C06 06-2010
Domestic and commercial laundering

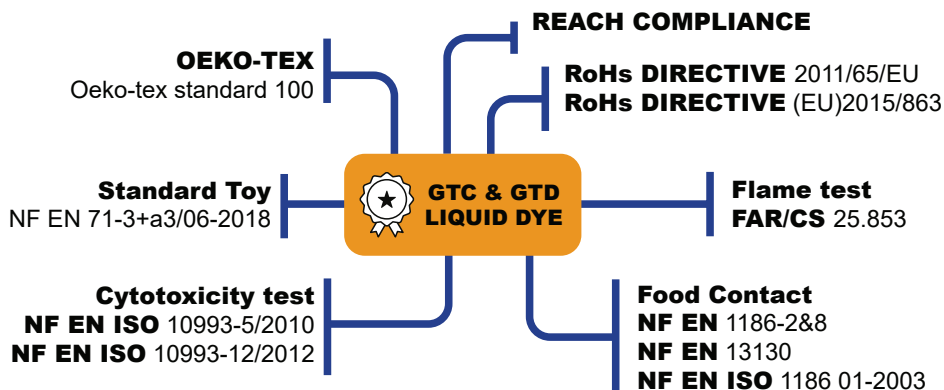
NF EN ISO
105 E04:2013-06
Perspiration

NF EN ISO
105 X12 09-2016
Rubbing

NF EN ISO
11507
UV Light

Certificates N° : **120-0853/1** and **ERO031736-1 (UV)**
Tests carried out on the 8485 Black GTD, 8211C Black GTC and anti-UV 8630.

REQUIREMENTS AND STANDARDS



Certificates N° : **120-0853/1**, **18-00335** and **CYT07-LM-20/0220**
Tests carried out on the 8485 Black GTD (**Cytotoxicity**, **Toy**, **Oeko-tex**); the 8889 Blue GTD (**Food**); the 8477 Blue (**Oeko-tex**) and the 8473 Scarlet (**Oeko-tex**).

TCN undertakes to supply quality Products, without pledging that said Products will be suitable for any particular use. The customers should be responsible for the use and application of Products, without recourse against TCN.

DURABILITY

As a strong player in the chemical Industries, our CSR policy is getting stronger and more factual. We integrate social, societal, environmental and economic issues throughout the whole chain.



COLOR CHART : GTC

Illustrative colors

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

Yellow and Orange



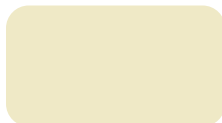
937 Fluo yellow



834 Lemon yellow



8353 Golden yellow



8322 Ivory

Pink and Chocolate



888 Pink



6734 Cyclamen



836 Ruby



1066 Violet



8352 Brown



8323 Chocolate

Cyan and Navy



7302 Cyan



6654 Turquoise



3672 Blue



3674 Royal Blue

Fluo anise and Black



7382 Fluo Anise



8361 Green



8362 Khaki



8644 Grey

Pure colors in bold



5766 Blond



838 Brown



7199 Orange



7776 Plum



849 Scarlet



9017 Red



3697 Burgundy



837 Navy



**For Additive Manufacturing :
Absolute depth of black**



8547 Grey



8211C Black*



9093AM ULTRA BLACK

* Several references available depending on the material to be colored.
8211C on PA ; 9008 on PMMA

COLOR CHART : GTD

Illustrative colors

A range of 20 standard colors is available and all miscible with each other to achieve an infinity of colors.



8471 Yellow



8645 Orange



8901 Brick



8473 Scarlet



9015 Red



8475 Burgundy



8476 Plum



8889 Blue



8477 Blue



8486 Royal Blue



8478 Navy



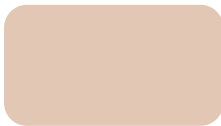
8479 Green



8904 Green



9077 Khaki



8916 Ivory



8482 Brown



8483 Chocolate



8489 Light Grey



8484 Grey



8485 Black

Pure colors in bold

Q&A

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 disgorge?

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 the SDS. You can find our certificates and labels on page 05.

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 bleach the part with our discolorant product on page 13.

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 instructions, with extra fee.

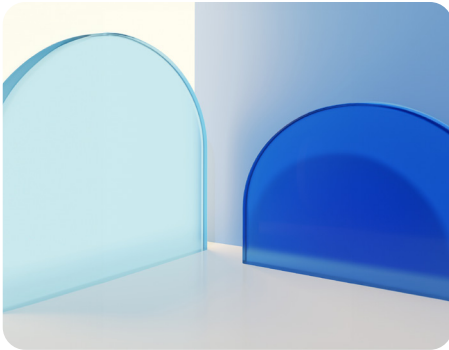
USES : GTC



Mock-up and Prototyping



Additive manufacturing



Traditional manufacturing



Fashion



Drones



Jewelry



Sport

And many other sectors.

USES : GTD



Automotive



Aerospace



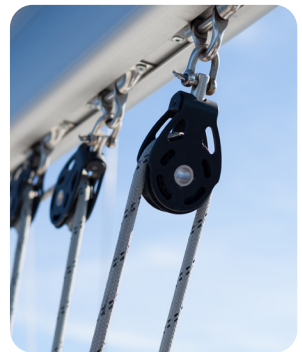
Prosthesis



Orthosis



Eyewear



Boating

Watchmaking, Caravaning, Cases, Music accessories, Energies ...

A FEW PARTNERS



For industrial dyeing applications, we recommend consulting the range of specialized ultrasonic dyeing equipments from our German partner, **Schmitt Ultraschalltechnik GmbH (SUT)**.

Find out more : <https://www.schmitt-ultrasound.com/dyeing/>

The **3DWave** is an all in one fully automated system with no intermediate handling offered by our Italian partner **Norblast**.

A complete cycle (Prerinse, dye, rinse and hot dry) for up to a full build HP Jet Fusion 5200 in less than 60 minutes.

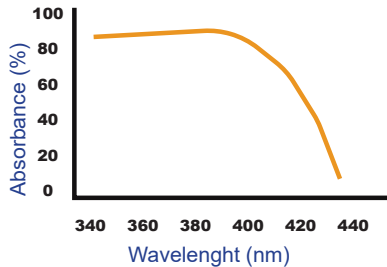
Find out more : <https://norblast.it/en/machines/3d-printing-line/3d-wave/>



RELATED PRODUCTS

TECHNICAL SPECIFICATIONS

UV ABSORBANCE ON PA12



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.



The **7520B cleaner** diluted in water to a 100mL/L ratio is suitable for effective cleaning of utensils and containers. Leave on for a few minutes, then rub and rinse.



The **4080 Discolorant**, used pure or diluted and hot, allows the removal of non-conforming color.

The **8460 GTD Detergent** prevents any potential disgorgement during final cleaning in a bath of 20 to 50 ml/ L by ultrasound.

OUR SERVICES



We are capable of shipping your order everywhere in the world through our own carriers or the ones you choose.

We can help ease the process start up and help you maintain the pace with our technical support and assistance.



TCN products are formulated and manufactured in our Paris factory thus maintaining the best qualities. If you need more insight into our process, you can come and visit our factory.

We offer to our customers the opportunity to purchase custom colors that are not available in our standard catalog.



Follow us on [LinkedIn](#) and [Youtube](#)

**Feel free to contact us at :
office@color-tcn.com**

ON-DEMAND COLOR

We have made specific colors to meet the need of our customers based on **RAL** and **PANTONE** references. It is also possible to do **color matchmaking**.



| | | | |
|--|---|---|--|
|  |  |  |  |
| RAL 1016 | RAL 2010 | RAL 3020 | RAL 3031 |
|  |  |  |  |
| RAL 4006 | RAL 5003 | RAL 5015 | RAL 5018 |
|  |  |  |  |
| RAL 6032 | RAL 6028 | RAL 6037 | RAL 8024 |



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A Colorful World

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ISO 9001:2015
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Management
System



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Do not litter

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