Techniques Chimiques Nouvelles

A Colorful World

DRY-BARRELING POLISHING PROCESS

Cellulose acetate, metal & multi-industry applications



BK26 POLISHING – Version1

TABLE OF CONTENTS

01 TCN 06

Presentation 08
Our values 09

02 DRY-BARRELING 10

Process overview 12
Your benefits 13
Dry-barreling process : step by step 14

03 PREMIUM RANGE 16

ECOC600 smoothing paste **18**
Presentation 18
Characteristics 18
Main materials 18
Simplified parameters 18
605+ VG polishing paste **19**
Presentation 19
Characteristics 19
For example 19
Main materials 19
Simplified parameters 19

04 STANDARD RANGE 20

SN accelerator **22**
Presentation 22
Characteristics 22
Main materials 22
Simplified parameters 22
2896C600 smoothing paste **23**
Presentation 23
Characteristics 23
Main materials 23
Simplified parameters 23
605AN polishing paste **24**
Presentation 24
Characteristics 24
For example 24
Main materials 24
Simplified parameters 24
BS9070 brightening paste **25**
Presentation 25
Characteristics 25
For example 25
Main materials 25
Simplified parameters 25

05 RELATED PRODUCTS 26

9270 prepolish 28
8622 grinding paste 29
605 binding base 30
Polishing workflow 31
Detergents 32
Acetate glues 33

07 APPLICATIONS 34

06 EQUIPMENT 38

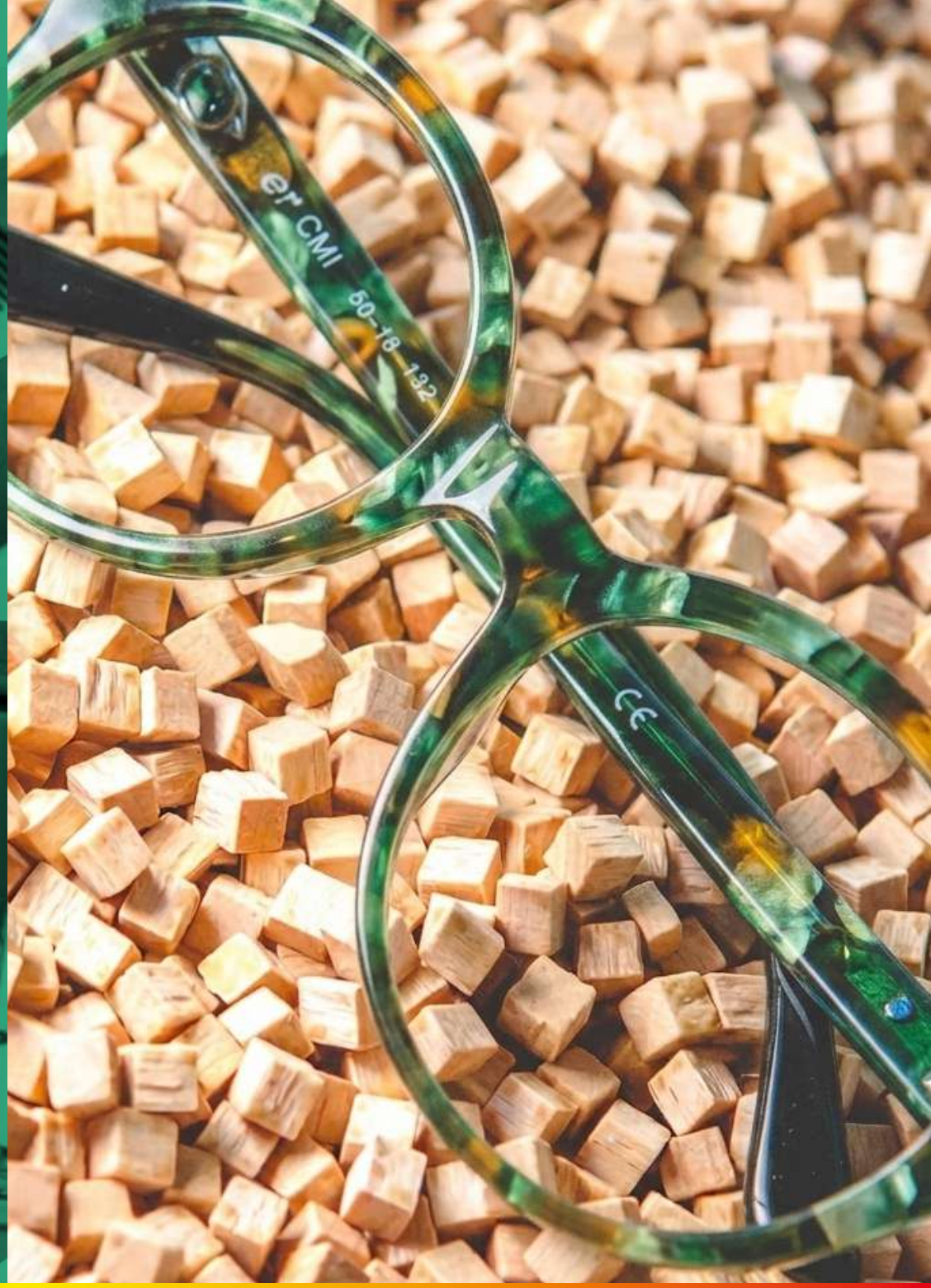
08 OUR SERVICES 42

09 FAQ 44

Business applications

Dry-barreling is a dry-treatment process used to achieve a mirror-polished finish on a wide range of parts made from plastics as well as natural materials such as mother-of-pearl, horn and also metals.

- EYEWEAR
- PLASTIC AND NATURAL BUTTONS
- HAIR ACCESSORIES
- JEWELRY
- COMBS
- UNIQUE PIECE
- TOKENS, PAWNS
- CELLULOSE ACETATE HIGH-END ITEMS



TCN

01

Presentation 8
Our values 9

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.

TCN offers a complete range of polishing pastes for handmade and industrial eyewear, while providing simple, fast, and efficient solutions for polishing plastic parts that integrate 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.

La FRENCH FAB

Réseau ileDeFrance ENTREPRISES

TÜVRheinland CERTIFIED
ISO 9001:2015
ISO 14001:2015
Management System
www.tuv.com
ID 9000027132

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.

Responsible Care

DIAGNOSTIC CONFIRMÉ

LE COQ VERT

DRY BARRELING

02

Process overview 12
Your benefits 13
Dry-barreling process : step by step 14

DRY-BARRELING 02

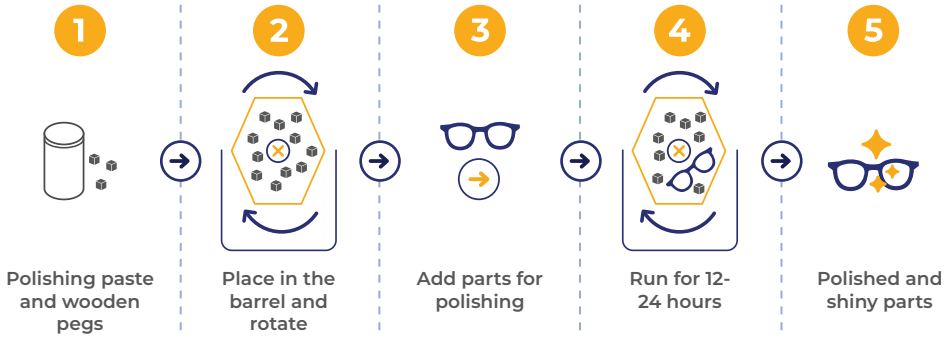
Process Overview

Our polishing process: A unique know-how!

The process consists of placing the parts to be polished in bulk into rotating barrels containing small wooden pegs previously coated with our specially formulated abrasive polishing compounds. As the barrels rotate, the combined action of the wooden media and the compounds gradually and evenly works the surfaces.

The process is carried out through several successive stages: **grinding, smoothing, polishing**, and, optionally, **brightening**. Each stage contributes to obtaining a uniform and glossy final finish while preserving the shapes, curves, and delicate edges of the parts, particularly those of eyewear frames.

We formulate and manufacture in France a complete range of polishing compounds, available in different grain sizes, designed to cover the entire process: **grinding, smoothing, polishing, and brightening**.



DATA FOR INFORMATION PURPOSES ONLY

All our production is carried out in our workshops, located close to the French eyewear industry. Our products are distributed worldwide. We also supply all complementary products required for the process, including detergents, wooden pegs, and process oils.

Your benefits

COMPLETE PRODUCT RANGE

Polishing compounds covering **every stage of the process,** from deburing to final high-gloss finishing.

VERSATILE APPLICATIONS

Solutions suitable for a **wide range of materials:** plastics, composites, resins, and other industrial substrates.

HIGH EFFICIENCY

Concentrated technical formulations delivering **optimal performance with low product consumption.**

PRODUCTIVITY GAIN

A process that **reduces production costs.**

SCALABILITY

Ability to scale **from trial to full industrial production** without loss of performance

REPRODUCIBILITY

The consistency of our polishing pastes **eases** the production of **serial parts.**

STEP 0
PREPARATION

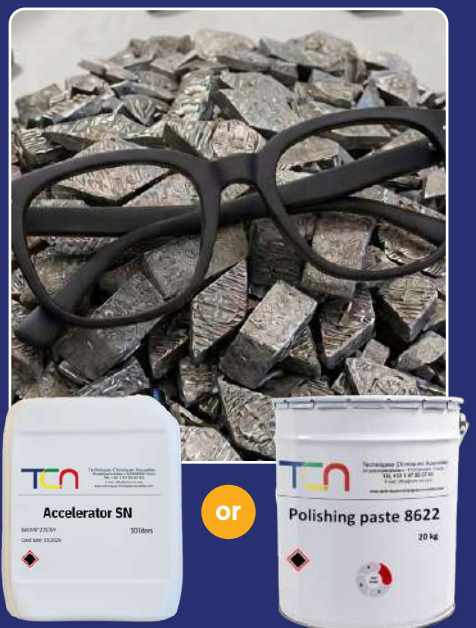


Function:
speed-up the grinding step

At this step, if you want to tint your acetate you can use our TACC cold liquid dyes.



STEP 1
GRINDING



+ pumice

Function:
Removal of major surface defects (machining marks, burrs)

STEP 2
SMOOTHING



Function:
Surface smootihing
Removal of scratch

STEP 3
POLISHING



Function:
Development of gloss and surface quality

STEP 4
BRIGHTENING



Function:
Final esthetic enhancement

PREMIUM RANGE

03

ECOC600 smoothing paste 18
- Presentation 18
- Characteristics 18
- Main materials 18
- Simplified parameters 18

605+ VG polishing paste 19
- Presentation 19
- Characteristics 19
- For example 19
- Main materials 19
- Simplified parameters 19

STEP2: SMOOTHING

ECOC600
smoothing paste : an eco-designed polishing paste

Presentation

ECO C600 is the ideal solution for those who want to combine professional performance with environmental responsibility.

Formulated with bio-based ingredients, it does not contain any classified substances. Crystalline silica-free, it is a safe choice for the health of users.

Also environmentally friendly, it is made with plant-based solvents and produces no emissions of petrochemical solvents into the atmosphere.

Its abrasiveness is identical to that of our best-selling 2896C600, guaranteeing a high level of performance.



NO SILICA

ORIGINE FRANCE GARANTIE

Produit en Ile de France

Packaging: metal pail of 20 kg

Characteristic:
Gloss: ●●○○○
Cut: ●●●○○

For example: Results on smoothed cellulose acetate 24 to 48 hours: roughness Ra 0.20µm ± 0.10 µm gloss 60°: 40 GU ± 10.

Main materials:
Cellulose acetate / Cellulose propionate / Hard plastics / Bioplastics / SLA resins / Plexiglas® / Wood

Simplified parameters

Rotation speed	Duration	Pegs	Charge
24 to 28 rpm	24 to 48 h	100% wooden lozenge 6 mm or 8 mm or 100% wooden cube 6 or 8 mm or 50% of each	~+150g /cycle in hexagonal barrel 60x60 cm

STEP3: POLISHING

605+VG
polishing paste

Presentation

Versatile, **605+VG** polishing paste delivers a high-quality mirror finish on premium parts made from cellulose acetate, polyester, Plexiglass®, and precious metals. It provides fine polishing performance for an exceptional level of gloss.

Its formulation contains very fine abrasives that act directly on the surface of the parts. Unlike waxing products, 605+VG works by gently polishing the material itself, enabling ultra-bright and long-lasting finishes. It effectively removes surface defects and micro-scratches.

One of its key advantages is the clean finish it provides: the compound leaves no greasy residue on the parts. When removed from the barrel, the pieces are clean, bright, and ready to use, with no additional cleaning required.



NO SILICA

ORIGINE FRANCE GARANTIE

Produit en Ile de France

Packaging: metal pail of 20 kg

Characteristic:
Gloss: ●●●●○
Cut: ●●○○○

For example:
Results on polished cellulose acetate 16 hours: roughness Ra 0.20 µm ± 0.10 µm. gloss 60°: 85 GU ± 10.

Main materials:
Cellulose acetate / Cellulose propionate / Hard plastics / Bioplastics / SLA resins / Plexiglas® / Wood

Note: The Base 605 is used to prepare the hanging of the paste on the pegs.
Charge : +150g /cycle in hexagonal barrel 60x60 cm

Simplified parameters

Rotation speed	Duration	Pegs	Charge
22 to 24 rpm	16 to 24 h	100% wooden cube 4 mm or 100% wooden point 5 mm	~+150g /cycle in hexagonal barrel 60x60 cm

STANDARD RANGE

04

SN accelerator 22
- Presentation 22
- Characteristics 22
- Main materials 22
- Simplified parameters 22

2896C600 smoothing paste 23
- Presentation 23
- Characteristics 23
- Main materials 23
- Simplified parameters 23

605AN polishing paste 24
- Presentation 24
- Characteristics 24
- For example 24
- Main materials 24
- Simplified parameters 24

BS9070 brightening paste 25
- Presentation 25
- Characteristics 25
- For example 25
- Main materials 25
- Simplified parameters 25

STANDARD RANGE 04

STEP1: GRINDING

SN accelerator



Presentation

SN accelerator is a process oil specially formulated to optimize the abrasive action of pumice during the first deburring step.

In combination with powdered pumice, it is the traditional grinding solution for a rapid removal of important surface defects: parting lines, burns, machining marks.

Its use ensures efficient stock removal while preparing the surface for the following sanding and polishing steps.

Packaging: Jerrycan of 10L

Main materials:
Cellulose acetate / Cellulose propionate / Hard plastics / Bioplastics / SLA resins / Plexiglas® / Wood

Simplified parameters

Rotation speed	Duration	Pegs
28 to 30 rpm	24 to 48 h	50% nylon lozenge 6 mm 50% wooden cube 10 or 12 mm

STEP2: SMOOTHING

2896C600
smoothing paste



Presentation

The **2896C600** smoothing paste is our historical bestseller, recognized for its exceptional performance in dry polishing cellulose acetate and cellulose propionate.

It provides efficient intermediate polishing, smoothing the parts and preparing them for the fine polishing stage.

Used in the second stage, it is the essential passage between sanding and polishing in order to obtain an optimal surface finish, without the «orange peel» effect.

Packaging: metal pail of 20 kg

Characteristic:
Gloss: ●●○○○
Cut: ●●●○○

For example: Results on smoothed cellulose acetate 24 to 48 hours : roughness Ra 0.20µm ± 0.10 µm. gloss 60°: 40 GU ± 10.

Main materials: Cellulose acetate / Cellulose propionate / Hard plastics / Bioplastics / SLA resins / Plexiglas® / Wood / Precious metals / Soft metals (Zamak, ...)

Simplified parameters

Rotation speed	Duration	Pegs	Charge
24 to 28 rpm	24 to 48 h	100% wooden lozenge 6 mm or 8 mm or 100% wooden cube 6 or 8 mm or 50% of each	+200g /cycle in hexagonal barrel 60x60 cm

STEP3: POLISHING

605AN
polishing paste



NO SILICA

ORIGINE FRANCE GARANTIE

Produit en Ile de France

Presentation

Versatile, **605AN** polishing paste delivers a high-quality mirror finish on premium parts made from cellulose acetate, polyester, Plexiglas®, and precious metals. It provides fine polishing performance for an exceptional level of gloss.

Its formulation contains very fine abrasives that act directly on the surface of the parts. Unlike waxing products, 605AN works by gently polishing the material itself, enabling ultra-bright and long-lasting finishes.

It effectively removes surface defects and micro-scratches.

One of its main advantages is the finish it offers by leaving a protective greasy film to protect the polished parts from any micro-scratches during handling.

Packaging: metal pail of 20 kg

Characteristic:
Gloss: ●●●○○
Abrasiveness: ●●○○○

For example: Results on polished cellulose acetate 16 hours: roughness Ra 0.04 µm — gloss 60°: 85 GU.

Main materials: Cellulose acetate / Cellulose propionate / Hard plastics / Bioplastics / SLA resins / Plexiglas® / Wood

Note: The Base 605 is used to prepare the hanging of the paste on the pegs.

Simplified parameters

Rotation speed	Duration	Pegs	Charge
22 to 24 rpm	16 to 24 h	100% wooden cube 4 mm or 100% wooden point 5 mm	+150g /cycle in hexagonal barrel 60x60 cm

STEP4: BRIGHTENING

BS9070
brightening paste



NO SILICA

ORIGINE FRANCE GARANTIE

Produit en Ile de France

Presentation

This optional step is the preferred choice for professionals looking for a superior gloss result.

BS9070 brightening paste is formulated with self-polishing vegetable waxes that guarantee a perfect, specular finish on cellulose acetate and natural materials.

Ideal for final finishing operations and after a dipping dyeing process, it brings a touch of perfection in just a few hours by offering shine and depth to the pieces.

It provides long-lasting water and dirt repellent protection, while enhancing the appearance of treated parts.

Packaging: metal pail of 12 kg

Characteristic:
Gloss: ●●●●●
Abrasiveness: ○○○○○

For example: Results on polished cellulose acetate 2 hours: roughness Ra 0.01 µm — gloss 60°: 98 GU.

Main materials: Cellulose acetate / Cellulose propionate / Hard plastics / Bioplastics / SLA resins / Plexiglas® / Wood

Simplified parameters

Rotation speed	Duration	Pegs	Charge
22 to 24 rpm	2 to 6 h	100% wooden lozenge 6 mm or wooden point 5 mm	+150g /cycle in hexagonal barrel 60x60 cm

RELATED PRODUCTS

05

9270 prepolish	28
8622 grinding paste	29
605 binding base	30
Polishing workflow	31
Detergents	32
Acetate glues	33

STANDARD RANGE 05

STEP 0 : PREPARATION

9270
Prepolish

Presentation

9270 prepolish is a ready-to-use, liquid technical solvent designed to speed up and facilitate the grinding stage.

It is used in rapid immersion before the start of the polishing cycle: the parts are immersed in the product for a few seconds, then dried before being introduced into the barrel. Its use saves significant time, is simple and does not present identified toxic risks under recommended conditions of use.



Packaging: Jerrycan of 10L

Simplified parameters:
Immerse the parts to be polished for a few seconds in the 9270 prepolish which is ready to use and let dry. Start the dry-polishing cycle.

STEP 1 : GRINDING

8622
grinding paste

Presentation

Paste 8622 is designed for light grinding, when the surface condition does not require intense material removal.

Particularly effective on hard plastics, it prepares the surface before varnishing and is ideally suited to cellulose acetate to preserve the edges of the parts.

It is an alternative to pumice deburring, particularly suitable for parts requiring more delicate processing.



Packaging: metal pail of 20 kg

Characteristic:
Gloss: ● ○ ○ ○ ○
Cut: ● ● ● ● ○

Main materials: Cellulose acetate / Cellulose propionate / Hard plastics / Bioplastics / SLA resins / Plexiglas® / Wood / Precious metals / Soft metals (Zamak, ...)

Simplified parameters

Rotation speed	Duration	Pegs
28 to 30 rpm	24 to 48 h	100% nylon lozenge or 100% wooden cube 10/8 or 50% of each

Base 605
binding base

Presentation

Base 605 is used to prepare the coating mixture and improve paste adhesion on wooden media. It is used for the preparation of pegs to receive the 605+VG and 605AN polishing pastes.



Packaging: metal pail of 12 kg

Pegs

Our legs made of natural wood (beech or birch) are the essential element of barrel dry polishing. They are the support on which our polishing pastes are coated.

Guaranteed durable, pollution-free, made of untreated wood, they are ready to be coated with our polishing products.



WOODEN CUBE

Approximate Size:
- 6x6x6
- 8x8x8
- 10x10x10
- 12x12x12



WOODEN LOZENGE

Approximate Size:
- 6x20
- 8x24
- 10x26



NYLON LOZENGE

Approximate Size:
- 8x21



WOODEN LOZENGE

Approximate Size:
- 5x25

Packaging: Packed by 25 or 30 kg bag
Market: Eyewear, garment accessories, jewelry, handmade pieces

The choice of the size, shape and material of the logs is decisive in achieving an optimal result adapted to each process step and the geometry of the parts.

POLISHING WORKFLOW

CLEANING	TP8002 detergent (to remove burn marks)
STEP 0	9070 Prepolish
STEP 1	Accelerator SN + pumice or Paste 8622
CLEANING	6179 detergent or 6170UC detergent
STEP 2	Paste ECOC600 or Paste 2896C600
CLEANING	6179 detergent or 6170UC detergent
OPTIONAL	Base 605 (pegs preparation)
STEP 3	Paste 605+VG or Paste 605AN
CLEANING	6170UC detergent
OPTIONAL	TACC Liquid dyes (to dye your acetate)
STEP 4	Paste BS9070

Detergents

Packaging: Jerrycan of 10L

At each step of the polishing process, our detergents allow the essential degreasing and ultrasonic cleaning : 5 to 20 mL/L

6179 detergent



6179 detergent is formulated for ultrasonic cleaning of residue from the polishing step.

It complements the action of the 6170UC detergent by specifically targeting polishing paste residues, ensuring a thorough cleaning and a perfectly prepared surface for finishing operations.

Restricted goods for transport regulation

6170UC detergent



6170UC detergent is specially formulated for ultrasonic cleaning of parts between each stage of polishing.

It effectively removes greasy residues from deburring, ensuring the cleanliness of the workpieces and the quality of polishing in the following steps.

TP8002 detergent



Cleaning between each step is essential to prevent clogging of the barrels and maintain the quality of the finish.

TP8002 detergent is specially formulated for ultrasonic cleaning of engraved parts that need to be burned out.

Restricted goods for transport regulation

Acetate glues

Packaging: Jerrycan of 1L

Specially formulated to meet the requirements of the cellulose acetate eyewear and accessories industry, our adhesives ensure a reliable, durable and perfectly controlled assembly.

Complementary to the coloring and finishing processes, our acetate adhesives make assembly operations safer, optimize the mechanical performance of parts and guarantee consistent quality in accordance with the high standards of the manufactures.



6948 Cold Glue

6948 Cold Glue is intended for assembly operations requiring precision and control, especially for small parts such as nose pads or frame lugs. It allows for clean and homogeneous bonding, while respecting the structure and aesthetics of the material. Suitable for artisanal or industrial production environments, it guarantees excellent mechanical strength and long-lasting stability over time. This cold glue must be diluted in acetone before use. As a reference, 1 kg of cold glue can produce up to 10 kg of ready-to-use adhesive mixture, depending on the required viscosity and application method.

6635C Hot Glue

6635C hot glue, on the other hand, is designed for the lamination of acetate sheets under pressure. It offers enhanced grip and quick implementation, adapted to sustained production rates. Its ready-to-use formulation ensures optimal compatibility with cellulose acetate, while maintaining the transparency and visual quality of the assemblies, with no bubbles and no color bleeding.



APPLICATIONS



06

APPLICATIONS 06

Handmade eyewear



High-end jewelry



Hair ornaments



Dice, pawns, tokens



Cellulose acetate & acrylic frames



SLA resin items



Mother-of-pearl items



Horn buttons



Combs



Polyester button



Perfume bottle cap



Buckles



EQUIPMENT



07

EQUIPMENT 07

The equipment shown in this catalogue is provided as an example of possible dry-barreling configurations. Final equipment selection depends on production volume, barrel geometry, part design, material sensitivity, media type and expected finish.

TCN supports manufacturers in defining the appropriate dry-barreling process, including compound selection, media choice, dosage, cycle time, cleaning sequence and scale-up from trials to production.

All recommendations are provided as process guidance and must be validated by the user under their own industrial conditions, in accordance with equipment supplier specifications and applicable safety requirements.

Czech Republic



SMALL
BATCH
TOOLS

France



JAC
Le meilleur de la couleur

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.

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

08

PROCESS & TECHNICAL PERFORMANCE

01 - How does dry-barreling polishing work?
Dry-barreling consists of polishing parts inside rotating barrels filled with wooden pegs coated with abrasive polishing compounds. During rotation, the combined mechanical action of the media and the compounds progressively smooths and polishes the surface while preserving the geometry of the parts.

02 - Which polishing step is the most critical?
The smoothing step is generally the most critical stage of the process. It ensures the transition between material removal and fine polishing. Insufficient smoothing may lead to visible defects such as “orange peel” effect, uneven gloss, or residual machining marks after polishing.

03 - How to avoid the orange peel effect?
The orange peel effect is typically caused by:
- insufficient smoothing duration,
- inadequate peg loading,
- excessive rotation speed,
- poor cleaning between stages,
- or an inappropriate abrasive sequence.

A properly controlled smoothing stage, combined with adequate ultrasonic cleaning using 6170UC or 6179 detergents, is essential to obtain a homogeneous surface before polishing.

04 - How to preserve sharp edges on acetate frames?
Preservation of edges depends on:
- proper selection of wooden media,
- controlled abrasiveness,
- optimized rotation speed,
- and adapted cycle duration.

Fine polishing compounds such as 605AN or 605+VG are specifically designed to enhance gloss while minimizing edge rounding on premium acetate frames.

05 - How to reduce polishing cycle times?
Cycle times can be optimized through:
- pre-treatment solutions such as 9270 prepolish,
- optimized barrel filling ratio,
- correct media selection,
- stable rotational speed,
- and proper process sequencing.

Reducing cycle times must always be balanced with surface quality requirements.

06 - Can several materials be polished in the same barrel?
It is generally not recommended to process different materials in the same barrel. Variations in hardness, geometry, and abrasion behavior may lead to inconsistent finishes, contamination, or uneven polishing quality.

07 - How to improve gloss level?
Gloss level can be improved through:
- finer abrasive stages,
- optimized cleaning between steps,
- correct polishing compound dosage,
- stable process parameters,
- and optional brightening stages such as BS9070.

Final gloss also depends on the initial surface condition and material quality.

08 - What influences final roughness and gloss?
Final surface quality depends on several parameters:
- initial surface condition,
- polishing sequence,
- polishing compound formulation,
- wooden media type and condition,
- rotation speed,
- cycle duration,
- cleaning quality,
- and material characteristics.

Stable process control is essential to ensure reproducible roughness and gloss values.

09 - Can polishing be integrated after dip-dyeing?
Yes. Depending on the desired visual result, polishing can be performed before or after dip-dyeing.
- Before coloration: improves surface uniformity and dye penetration consistency.
- After coloration, polishing corresponds to the final gloss-enhancement step, performed as Step 4 with BS970, to enhance gloss, depth, and the premium visual appearance of the finished part.

The optimal sequence depends on the material, geometry, and expected cosmetic finish.

10 - How to optimize peg loading?
Efficient peg loading requires:
- sufficient filling ratio,
- homogeneous compound distribution,
- proper media shape selection,
- and regular media maintenance.

Insufficient or overloaded barrels may generate inconsistent polishing results and process instability.

PROCESS CONTROL & REPEATABILITY

01 - How to ensure repeatable polishing results?

Repeatability is achieved through strict control of:

- cycle duration,
- rotation speed,
- polishing compound dosage,
- media condition,
- cleaning stages,
- and environmental conditions.

Consistent operating procedures are essential to maintain stable surface quality across production batches.

02 - How often should polishing compounds be refilled?

As a general guideline, polishing compounds should be replenished after each polishing cycle or according to process performance monitoring. The refill quantity depends on barrel size, load volume, and compound consumption rate.

03 - How to monitor polishing efficiency over time?

Polishing efficiency can be monitored through:

- visual inspection,
- gloss measurements,
- roughness measurements,
- process cycle consistency,
- and observation of media saturation or contamination.

Regular process audits help maintain long-term stability.

04 - When should wooden pegs be replaced?

Wooden pegs should be replaced when:

- their geometry becomes excessively worn,
- polishing efficiency decreases,
- contamination accumulates,
- or compound retention becomes insufficient.

Proper media maintenance is critical for process consistency.

05 - What are the most common process deviations?

Common deviations include:

- orange peel effect,
- excessive edge rounding,
- gloss inconsistency,
- residual scratches,
- barrel clogging,
- and uneven surface appearance.

Most issues are linked to incorrect process parameters, insufficient cleaning, or inappropriate media selection.

06 - Why do gloss levels vary from batch to batch?

Gloss variations are generally caused by:

- inconsistent compound dosage,
- worn media,
- unstable barrel loading,
- insufficient cleaning,
- material variability,
- or uncontrolled cycle conditions.

Standardized operating procedures are essential to minimize variability.

MATERIAL COMPATIBILITY

01 - Which polymers are compatible?

Our polishing solutions are compatible with a wide range of materials including:

- cellulose acetate,
- cellulose propionate,
- hard plastics,
- bioplastics,
- PMMA/Plexiglas®,
- wood,
- SLA resins,
- soft metals (Zamak, ...)
- and selected technical polymers.

Compatibility depends on geometry, hardness, and target finish.

02 - Can bioplastics be polished?

Yes. Several of our polishing compounds are specifically designed for bioplastics and eco-designed materials while maintaining high surface quality and industrial performance.

03 - Are SLA and 3D printed parts compatible?

Yes. SLA and selected additive manufacturing parts can be polished successfully. Process parameters must be adapted according to porosity, surface condition, and material sensitivity.

04 - Can natural materials be processed?

Yes. Natural materials such as horn, mother-of-pearl, wood, and certain organic materials can be polished using adapted compounds and wooden media configurations.

05 - Is the process suitable for delicate geometries?
Yes. Dry-barreling is particularly suitable for complex and delicate geometries when process parameters are properly optimized. The selection of media shape, abrasiveness, cycle duration, loading level of wooden pegs in the barrel, and rotation speed is essential to preserve details and edges.

INDUSTRIAL INTEGRATION & SUPPORT

01 - Can the process be scaled from prototyping to mass production?
Yes. Our dry-barreling solutions are designed to ensure a seamless transition from prototyping and small-series production to full industrial manufacturing without compromising performance or repeatability.

02 - What equipment is recommended?
The process typically requires:
- rotating barrels,
- adapted wooden media,
- ultrasonic cleaning systems,
- and controlled process management equipment.

Equipment recommendations depend on production volumes and part geometries.

03 - Can TCN assist in process optimization?
Yes. TCN provides technical support for:
- process optimization,
- product selection,
- troubleshooting,
- industrial integration,
- and finishing performance improvement.

04 - Are technical trials available?
Yes. Technical trials and sample evaluations can be organized in order to validate process compatibility and optimize finishing parameters according to customer requirements.

05 - How are samples and orders managed?
Samples may be provided for industrial evaluation depending on the project scope. Orders are managed according to quotation approval and production planning. Worldwide shipping solutions are available.

ORDERING & LOGISTICS

01 - How are orders, deliveries, and samples managed?
Orders must be sent by email to 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.

For any additional questions or tailored technical support, our team of experts is available to assist you.
Please contact us at: jy.morosolli@color-tcn.com



Techniques Chimiques Nouvelles

A Colorful World

office@color-tcn.com

20, rue des Carriers Italiens
91350 Grigny - FRANCE

www.techniques-chimiques-nouvelles.com

Design & Printing: Communikey.fr - Photocredits : Shutterstock, TCN and AI-generated visualisations