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news

Leather finishing

- **Lacquer in aqueous emulsion: INTERFIX 22.**
An intermediate fixation which increases adhesion
- **Fenice Polyurethanes:**
Zero Kilometer Technology
- **GROUND 14 soft waxy filler.**
Masking of defects and surface uniformity
- **Oily-waxy filler WAX 2020.**
Feel natural, gentle, warm and... round
- **Whitening waxes.**
Nuances and infinite possibilities
- **KEBINDER® PLT compound:**
Combining the aesthetic result with high performance

Shoes and leathersgoods

Leather World Care:
Highly effective leather care solutions

- **SECTION LACQUER® HS 5750/TC Series:**
Revolutionary "all-in-one" edge ink.
- **WATERSTAIN...**
Ecological, easy, astonishing

Waxes and oils
choose the
natural quality
for your finishing





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Lacquer in aqueous emulsion: INTERFIX 22 An intermediate fixation... which increases adhesion

The theme we wish to discuss in this article is the difficult adhesion, which is often found in the **finishing of buffalo leather**, between the colour coat and the pigmented basecoat when it is printed and milled for a long time.

This type of process is very common in **leather for furniture**, where the intermediate drumming, in addition to softening the leather hardened by the embossing, also has the purpose of **increasing the roundness** of the grain design.

Together with **positive effects on leather**, this finishing step also raises a problem: the natural fat of the leather (possibly together with poor fatliquors introduced into the leather during fatliquoring) surfacing from the flesh side, is spread on the surface of the grain side, creating major problems of overspray adhesion of the colour coat mixture applied immediately after milling.

When they are well studied, the colour coat mixes can sometimes **guarantee satisfactory over spray adhesion** even in these conditions, however there may be a residual problem that will arise later in time, the cause of which is still to be found in the fat-waxy substances of the crust and whose resolution is very complex.





The secondary phenomenon we are referring to is a worrying drop in the adhesion values of the finishing, especially wet, after the finished leather has been subjected to high heat and humidity for a few days during transport to the final manufacturer.

In this case, leathers that, when finished, gave completely positive results to the physical tests, after the tropical test show a fall in the same resistance.

Fenice has identified a ready-to-use specialty that applied as an intermediate isolation and followed by a specific colour coat, not only does it not show a collapse of resistance, but on the contrary, it has shown to increase the values preceding the tropical test itself.

This product is called **INTERFIX 22** and is a **lacquer in water emulsion** with very good behaviour on printing and horsing.



For an optimal result we suggest to apply the following colour coat mixture:

100	PIGMENT
500	K-TECH 400
150	PU SOFTY
100	AR 644
60	RESISTO 82
45	PE 140
25	CT 11

Fenice Polyurethanes: Zero Kilometer Technology



Polyurethanes are synthetic **polymers synthesized** for the first time in Germany, between the first and second world wars.

Chemically speaking, they are the product of the reaction of an isocyanate and a compound, called polyol, which is generally a polyester or a polyether, in some cases a polycarbonate. The reaction involved in the synthesis of polyurethanes - called "polyaddition" - gives rise to a macromolecule which, in morphological terms, is constituted by a succession of rigid segments (the isocyanic residues) alternated with soft segments (the polyol blocks), connected to each other by a bond called "urethane bond".

A particular class of polyurethanes is the **aqueous dispersions**, where the polymer is stably dispersed in water. These materials are **widely used in the industrial sectors** of paints and coatings in general, such as paints for wood, paper, metal or plastic surfaces or, in the tanning sector, paints for leather.



Polyurethanes. applications:



- industrial sectors of the paintings
- coatings (coatings)
- paints
- for wood
- for paper
- for metal / plastic surfaces
- for leather (tanning sector)

Adhesion polyurethanes in water

In the series of polyurethane polymers produced by Fenice there are also specialties used to **improve the adhesion of the finish** both as an anchor to the leather itself, which for various reasons could present difficulties of penetration and adhesion of the base mixtures, and between the layers of the same finish. Certain processes designed to generate particular and very pleasant effects, can however have, as a limit, a difficult over spray adhesion of the following applications.

The correct adhesion of the finish in its entirety is an indispensable condition for having a leather with **aesthetic qualities**, but also with adequate **physical resistances**.

The comparison test we carried out among our best specific brands was done on 3 substrates that can easily present difficulties of overspray adhesion: the dirty crust (dust, surface greasiness of various nature,...), the waxy/oily pull up leather and finally finished leather with cross-linked and aged polyurethane topcoat.

In the table below it is possible to consult the adhesion results obtained with the different polyurethanes, considering 1 a poor adhesion value and 5 the best over spray adhesion value.

As you can notice, the values of the new specialty **ADHESION PROMOTER 1300** stand out. This product is a soft PU that forms a very flexible and elastic film, with good mechanical properties.

Comparative chart between adhesion polyurethanes in water

	DIRTY CRUST	HOT WAX	AGED TOPCOATED LEATHER
UW 02	3/4	5	4/5
UW 03	2	3	4
UW 10	1	3	3
IVY 13	3	4	3/4
ADHESION PROMOTER 1300	5	5	5



GROUND 14: soft waxy filler

Masking of defects and surface uniformity

The finishing of full grain or buffed leathers with waxes and oils, either emulsified in water or applied after melting with a heated cylinder, must always deal with the problem of surface **defects of the leather** that are highlighted by these finishes. **Scars, thorns, salt spotting**, etc., which were more or less visible at the beginning of the process, often appear much more evident after the application of waxes and oils, resulting in being very dark and difficult to mask.

Our recent studies have identified a formulation very effective in not-highlighting the defects of the leather without altering the desired final result in terms of lightening effect and pull up.

This specialty is **GROUND 14**, a **very soft, non-ionic waxy filler** that applied pure on the crust by spray or rollercoater, in a quantity of about 5 g per sq/ft followed by regular finishing with oil and/or wax, **enables a decided upgrading of the selection** thanks to the **masking of the defects** and a remarkable **superficial uniformity**.

GROUND 14 does not require mechanical ironing or sandblasting after its application, but only regular drying in the oven. Finished leather is sandblasted or plated as per ordinary process.

A process that we consider useful to suggest and that is characterized by simplicity, effectiveness and pull up effect (similar to a hot wax) is:



step	mixture	procedure
1	GROUND 14	5g per sq/ft applied (pure)
2	DC 117	1 rollercoater aprox 6g per sq/ft
3	DC WAX 80.....100% or DC WAX 80.....50% DARK WAX50%	1 X spray aprox 7-8g per sq/ft
4		Sandblast (120°C)

Oily-waxy filler: WAX 2020

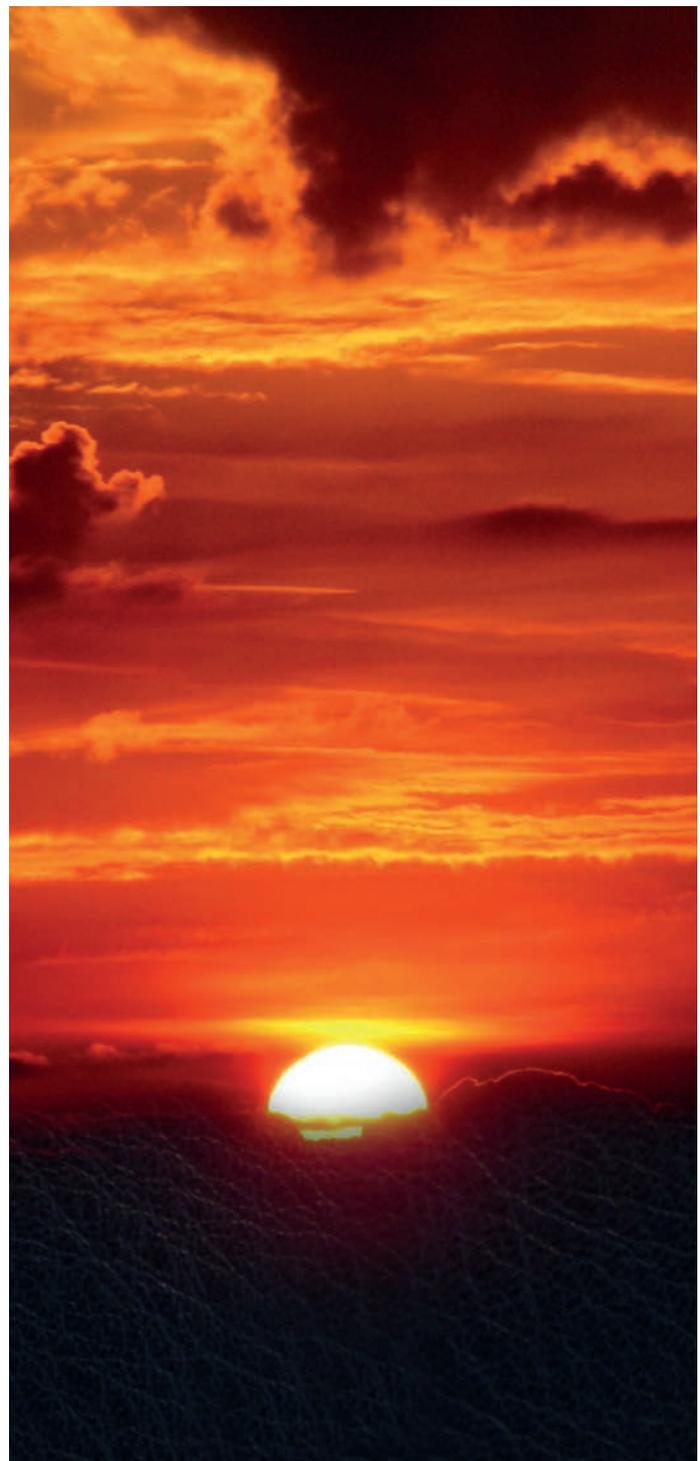
Natural, gentle, warm and... round feel



For the realization of **natural, waxy and little resined nappas**, as the current fashion requires, the components of the finishing used must be very soft, **not loading the leather grain** while having a **good filling** and **uniforming power** of the surface and, above all, making the leather **extremely natural, with gentle, warm and a round feel**, able to bring out the best qualities of the leather itself.

WAX 2020 is an oily-waxy filler, suggested as a widely used ingredient in this type of items, from the pre-bottom, where it penetrates the leather, **softening the grain**, to the covering hands, where it gives a **sheepskin-like waxy-greasy feel**, that is preserved until the finished one.

It is a **non-ionic formulation**, therefore compatible with both cationic and anionic mixtures, which has an **excellent mechanical workability** and **brushing reactivity**.



Whitening waxes. Nuances and infinite possibilities

The **whitening waxes**, more or less pronounced, have long been a widespread category in the range of finishing products.

Used above all to give an **aged-vintage look to the leather**, they were also used as highly **reactive components for brushing** the upper in a shoe factory. In this case the amorphous structure of the wax undergoes the action of strong rubbing of the brush which then fuses it and shapes it on the surface in a continuous manner, causing the wax-white appearance to be lost which instead becomes very **shiny and transparent** with **darkening action on the crust** itself.

Within polishable prebottoms these products provide a **great capacity for closing and sealing the grain** and can be used as long as the residual graying effect is properly contained or covered.

In the **finishing of the nappa** with a reduced content of synthetic binders, particularly fashionable in these times where we try to strongly **enhance the naturalness** of the “leather” material, these ingredients make an important contribution. Taking advantage of their high steric hindrance, it is possible to arrive at an **excellent regularization of the surface** of the grain, with **closure of small defects, sealing of the pores** and **homogeneous absorption** of the following finish.

After their application in mixtures with stucco action and/or polishable pre-bottoms, the felt rolling, also associated with high-temperature ironing, determines its fusion with a great polishing that gives **transparency to the finishing**.

The most interesting Fenice brands are: **DC 38** and **DC WAX 30** moderately bleached waxes with a soft and slightly oily hand and **DC WAX 40**, of intense whitening power and a smoother silky touch.

DC WAX 23, DC WAX 58, DC WAX 400, on the other hand, are waxes with a low whitening effect, but with excellent repolishability and a more elegant effect. Generally used in pre-bottoms and nappa basecoats which must be re-brushable and with a smooth waxy feel.

DC WAX 90, similar in effect to the previous ones, has the characteristic of being very effective in ironing, where it develops a high gloss, transparent and elegant, with a very pleasant feel, for which it is also used in final applications.

FOGGY WAX and **NEBBIA** are whitening specialties with a very marked effect, an almost filmed appearance and higher resistance to brushing. They have greater fixability and their touch is more slippery with silicone.

Finally we propose **DC WAX 150** as a wax with a bleached effect that remains even when the shoe is put in the oven after being assembled in a shoe factory, up to temperatures of 120 °C.



KEBINDER® PLT compound

Combining the aesthetic result with high performance



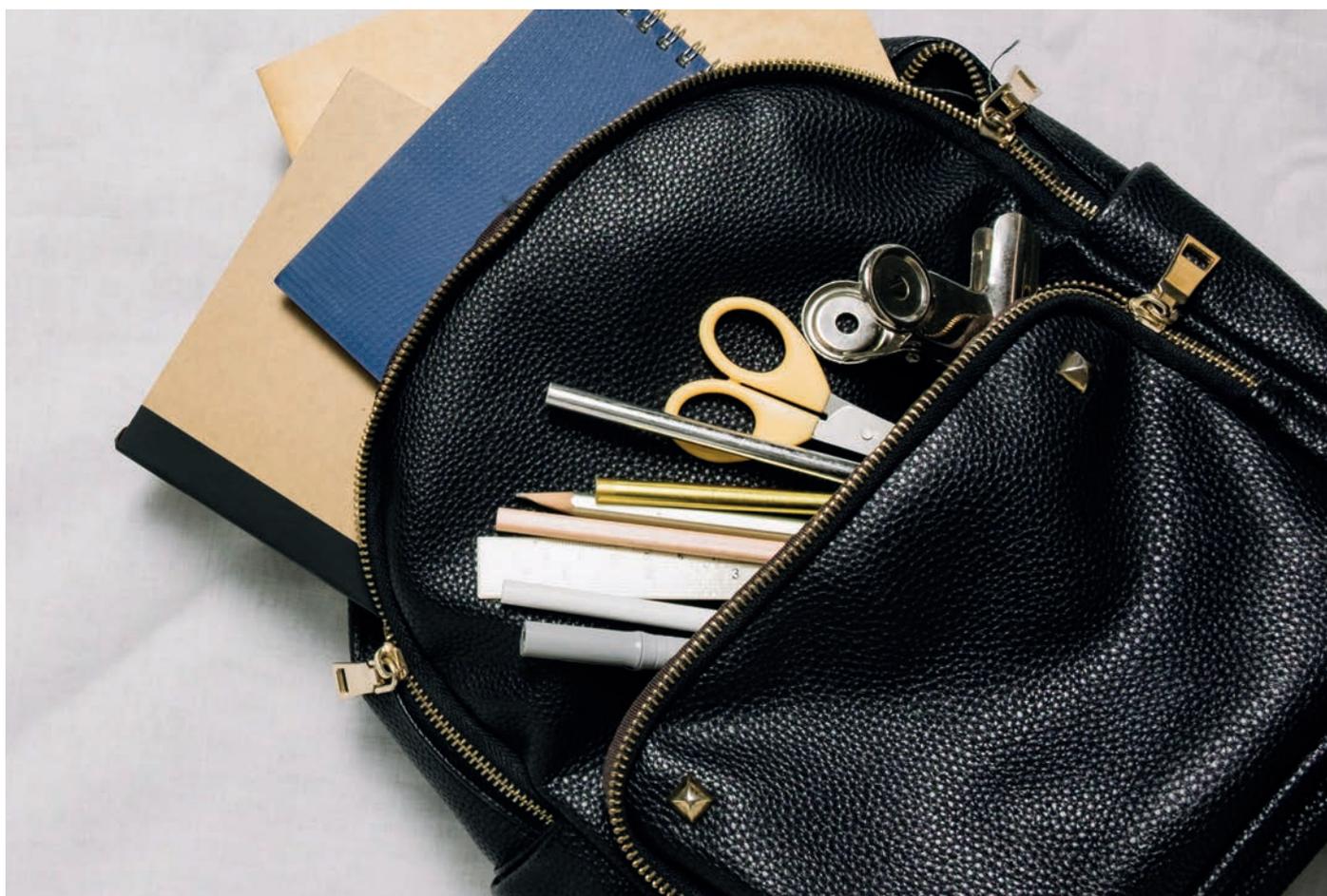
KEBINDER® PLT is a specific compound for making **leather goods**. A very natural product that gives the leather a **uniform appearance**, able to **mask small defects**.

It is a compound that forms a **soft and very elastic film** that does **not overload the leather** and **keeps the grain natural**, giving a **soft and pleasantly waxy hand**.

In order to obtain **good resistance to dry-wet rubbing**, we recommend the combination of **KEBINDER® PLT** with the **CT 11** cross-linker. Thanks to this addition it will be possible to **obtain good general fastness** by **maintaining a soft finish** that does not affect printability and overspray.

Spraying **KEBINDER® PLT** with the addition of pigments, the ideal family of products to combine with it, is certainly the **MICRODYNE series**: concentrated anionic dispersions of highly selected pigments, which guarantees the achievement of maximum strength in leather finishing.

KEBINDER® PLT is used both for milled articles, and for smooth articles depending on the combinations that can be made during the finishing phase with our products.



Leather World Care: Highly effective leather care solutions



Leather World Care is a complete line of products that are easy-to-use, specifically formulated to **maintain the softness and natural appearance** of footwear, bags and leather articles and **improve the beauty over time**. Cleaners, protectors, waterproofers, creams and revivers are offered in convenient packaging for the final consumer, guaranteeing full efficiency.

The following products are available with their display units:

- NATURE CREAM
- GREASE EMOLLIENT
- GENTLE CLEANER
- WATER-OFF
- NUBUCK RENEW
- STOP-WATER
- FRESH LEATHER



The Leather World Care Products catalogue is available. Ask for it from our sales representatives or you can find it at Fenice S.p.A. headquarters



FENICE
NEWS

SHOES AND LEATHERGOODS

SECTION LACQUER® HS 5750/TC Series Revolutionary “all-in-one” edge ink.

Finally, a high concentration, high quality resin-based edge ink that with a **few coats** allows to **obtain an extremely sealed, smooth and pleasantly matt edge.**

It is **easily applied**, by machine or manually. It is a **Section Lacquer®** that groups together the **best qualities of our sealing primer HS 5750 Series and the top colour AR 6450/T Series.**

It is available in **numerous colours.**

The application methods suitable for the various needs in the leathersgoods sector are available at our laboratories.



WATERSTAIN® Ecological, easy, astounding



WATERSTAIN®
colour chart is
available.
Ask our sales
representatives or
at the Fenice S.p.A.
Headquarters

WATERSTAIN® is a real evolution in the technological finishing of leathers in the world of: footwear, tanneries, leathergoods manufacturers and garment producers.

WATERSTAIN® consists of a series of fluid cream dyes, presented in a water-based setting that has revolutionized the approach to the dyeing and finishing of crust leathers.

Here is a summary of some of the most immediately appreciated characteristics:

- Dyeing power
- Softness and naturalness to the treated leather
- High general fastnesses
- Easy application

WATERSTAIN® colours can easily be applied by sponge or pad to obtain uniform or slightly 'cloudy' effects. The waxy and colour components within this speciality allow for a deep and intense dyeing power, with a **desirable reactivity when brushing**, together with **good general fastness** to leather, such as water resistance, wear resistance and rub fastness.





ask our commercial
representatives
the brochure
**POLYMERS DIVISION
PRODUCTS** with the
list of products for PU
leather producers and
chemicals formulators.

**P O L Y M E R S
D I V I S I O N
P R O D U C T S**

PU LEATHER PRODUCERS AND CHEMICALS FORMULATORS MARKET