

Dyeing Auxiliaries in continuous process



techna italia
Prodotti chimici industriali

 **FFICINA39**
CHEMISTRY PLUS CREATIVITY



We represent the constant development of a project, established in 1992, which concerns manufacture and sale of chemical specialities for textile industry.

Since the beginning, Officina39 and its parent company Techna Italia have shown innovation and technology on customer service, maintaining the flexibility and initiative.

Transparency and sustainability are important to us. With this mind, our company has been committed to certify important standard criteria:

GOTS Version 5.0, ZDHC and GREENSCREEN® Safer Chemical Assessments.

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CHEMISTRY PLUS CREATIVITY

Products List

DETERLENE MRC	Detergent and wetting agent
DETERLENE W-ON	Detergent and wetting agent
DETERPAL WT/LF	Detergent and wetting agent
SEQUESTRANTE 549	Sequestering agent/Anti-scaling compound
NOVALASE LT 40	Desizing agent
PEROX FE NEW	Stabilizer
DETERWET NA 75	Wetting agent
DETERWET MK	Wetting and antifoaming agent
PERMACAL SP	Dispersing and sequestering agent
DETERWET A-MI	Migration inhibitor
OXIDOL PTR LIQ.	Dyeing assistant
PERMACOL OP/BD	Soaping agent/Washing preparation
DISPERSOLO WS LIQ.	Dispersing agent
DETERSOLV CA	Soaping agent/Washing preparation
NOVOFIX FF 25 (NEW)	Fixing agent
NOVOFIX CT/HYD (NEW)	Fixing agent
NOAMIN OT / BASE OT CONC	Concentrated cationic softener
BASE WHI-Z	Softener
MICROFINISH BP/20	Lubricating preparation/Silicone microemulsion
MACROFINISH MAW	Macroemulsion
NOAMIN PE/N (SPECIAL TYPE SOFTENER)	Softener / Lubricant
INTENSE CEL PLUS	Special finishing agent polymer
REMOVER SIL NEW	Detergent
NOVOFIX WRI-S	Fixing agent/Wet rubbing improver
NOVAFast BHT/M NEW	Finishing agent & fiber protector/Washing preparation
NOVAPRET AP-V PLUS	Finishing agent
ANTISTRAM CAT NEW 600/ANTISTRAM CAT	Special finishing agent

Auxiliaries in padding process

General Requirements

- Stable to high electrolyte concentration
- Stable to high pH
- Stable to reductive chemicals (hydrosulfite, glucose)
- Ionic nature
- Non-foaming issue

Products

- **Wetting agent:** Ensures even liquor absorbance and de-aering.
- **Anti migration agent:** Avoids migration during drying, ideally no listing, good penetration, improved reproducibility.
- **Dispersing agent:** Improves the stability of disperse and vat dye liquors and avoids agglomeration and resulting dye spots.
- **Sequestering agent:** If soft water is not available. Avoids spots and fastness problems (e.g. crocking), ensures good levelness and surface appearance.



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OFFICINA³⁹
CHEMISTRY PLUS CREATIVITY

Recipe

Desizing

Pick-up 80 - 90 %

5 g/l

DETERLENE MRC/DETERLENE W-ON

3 g/l

SEQUESTRANTE 549

2 - 4 g/l

NOVALASE LT 40

Batching time: 4-8 hours

Bleaching

Pick-up 60 - 70 %

5 g/l

DETERLENE MRC

3 g/l

SEQUESTRANTE 549

4 - 6 g/l

PEROX FE

25 - 35 g/l

H2O2 (50 %)

30 - 40 g/l

NaOH (30-40' Be)

Steaming time: 12 - 20 minutes

Mercerization

Pick-up 60 - 70 %

0,5 - 1 g/l

DETERWET NA 75

x g/l

NaOH (20-30' Be)

Dyeing

x g/l

Dyes

2 - 3 g/l

DETERWET MK

2 - 3 g/l

SEQUETRANTE 549

5 - 10 g/l

DETERWET A-MI

x g/l

Salt

x g/l

NaOH

Deterlene MRC

DETERGENT AND WETTING AGENT

Rapid, low foaming, non ionic detergent and wetting agent, for removing oil from Cotton, PES/CO, PES, PA, WO etc. without losing efficiency in the presence of Hypochlorite, Chlorite and alkalis.

Benefits

- **Removal of oil stains by hot washing treatment.**
- **Scouring and bleaching.**
- **It can be used with all kinds of machinery, as it does not attack rubber.**
- **Fabric treated with DETERLENE MRC offers good hydrophility.**
- **Degreasing and brightening for Wool, Silk and its blends.**



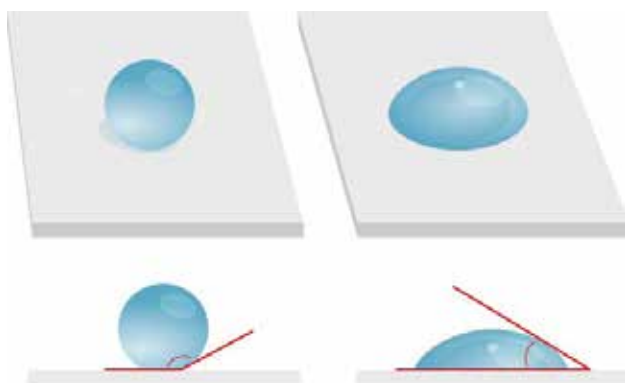
Deterpal WT/LF

DETERGENT AND WETTING AGENT

Non ionic, low foaming detergent/wetting agent, especially recommended to remove impurities from Cotton and synthetic substrates and their blends, during exhaust and continuous processes.

Benefits

- **Detergent for removing oil from Cotton, PES/CO, PES, PA, etc.**
- **Removal of oil stains by hot washing treatments.**
- **Scouring and bleaching.**
- **It may be used in all kinds of machinery, as it does not affect rubber.**
- **Fabrics treated with DETERPAL WT/LF offers good absorbency.**
- **Appropriate for discontinuous processes.**
- **It can be used also in continuous processes.**
- **It exhibits good wetting and rewetting properties.**
- **It has a good stability to agents causing hardness of water, alkalis and acids**
- **in the usual concentrations.**
- **Low foaming properties.**



Deterlene W-ON

DETERGENT AND WETTING AGENT

Low foaming detergent and wetting agent especially indicated for scouring and bleaching in semi-continuous and continuous processes.

Benefits

- **It is suitable in particular for Cotton and its blends**
- **It is suitable for scouring and bleaching**
- **Bleaching by pad-batch with high concentrations of Caustic Soda is possible**
- **Bleaching by pad-steam processes**
- **Scouring by pad-steam processes**
- **It is low foaming product**

*Absorbency of
100% Cotton fabric
after bleaching*



WITH CONVENTIONAL
DETERGENT



WITH DETERLENE W-ON

Sequestrante 549

DISPERSING AND SEQUESTERING AGENT

Dispersing and sequestering agent, suitable for pretreatment, dyeing and washing off processes.

Benefits

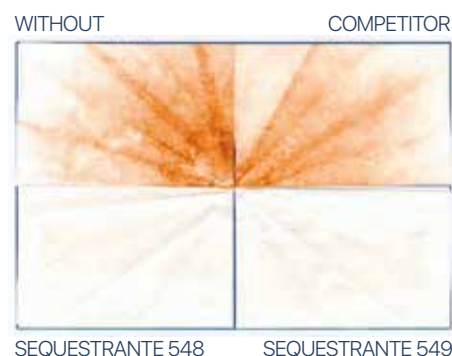
- It has sequestering properties
- Suitable for all kinds of textile goods (loose stock, yarn, woven, knitwear) made out of cellulose and blends
- It helps Calcium and Iron elimination, improving bleaching and dyeing processes
- Bleaching of cellulose and its blends
- It increases whiteness degree by exhaustion as well by continuous processes
- It has dispersing properties
- Scouring of Cotton and its blends
- It can be used during dyeing on vat, Sulphur and other dyestuffs that do not contain metals in their molecules
- It avoids agglomeration
- It helps the dispersion of Silicate and other soluble metals, improving touch and hydrophilicity
- It prevents corrosion and remove Oxide and Silicate deposits

Compared with Polyacrylates, SEQUESTRANTE 549 has:

*Stronger sequestering power towards hardness and heavy metal ions
Higher performances at high pH values*

Compared with Polyaminocarboxylates, SEQUESTRANTE 549 has:

*Less environmental impact, extracting heavy metals from soil and river beds, reintroducing them into superficial waters
Better stability to oxidizing agents
Better dispersing properties*



GOTS certified - ZDHC certified

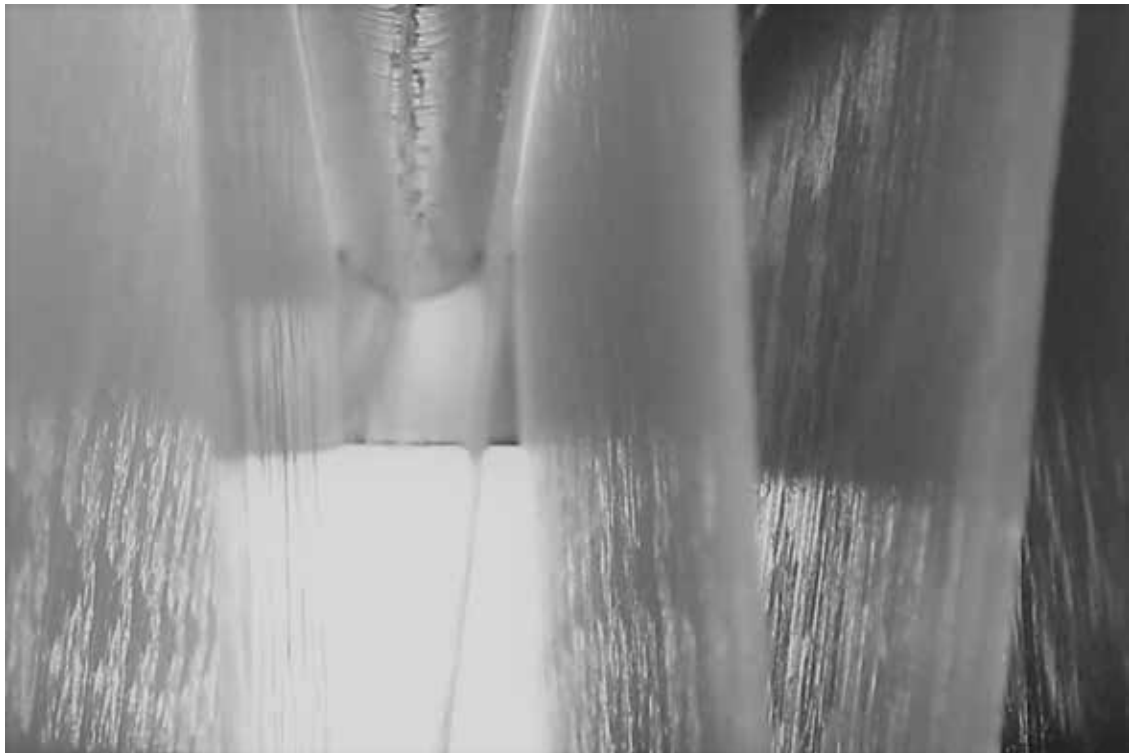
Novalase LT 40

DESIZING AGENT

Low temperature desizing agent based on alpha-amylase compound.

Benefits

- **It works at low temperature.**
- **It can be used at wide range of temperature (between 25 – 55°C).**
- **It eliminates all sizing product based on starch and its blends.**



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Perox FE New

STABILIZING AGENT

Peroxide organic stabilizing agent with heavy metal sequestering properties for continuous and semi-continuous exhaustion processes.

Benefits

- **Bleaching of Cotton, Viscose and its blends by exhaustion so much by boiling as by H.T.**
- **Bleaching by pad-batch in traditional systems or by extraction.**
- **Bleaching by pad-roll, combined with Sodium Silicate.**
- **Bleaching by pad-steam.**
- **Simultaneous bleaching and caustifying of PES/CO by pad-batch.**



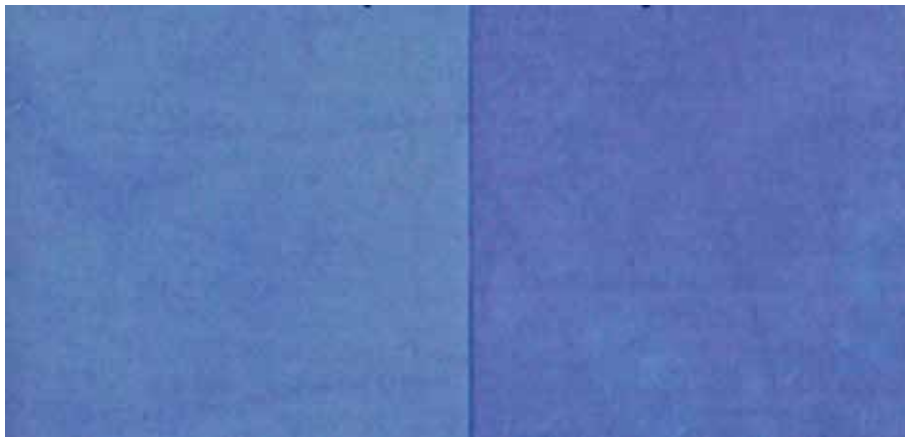
Deterwet NA 75

WETTING AGENT

Wetting agent for mercerization and caustification of yarns and fabrics of Cotton, Linen and their blends.

Benefits

- **It improves the dyeability**
- **It can work on grey fabric**
- **It can work on grey yarn**
- **It is a low foaming agent**



STANDARD PROCESS

PROCESS WITH DETERWET NA 75

Deterwet MK

WETTING AND ANTIFOAMING AGENT

Wetting and antifoaming agent for preparation processes by exhaustion, pad batch or pad steam.

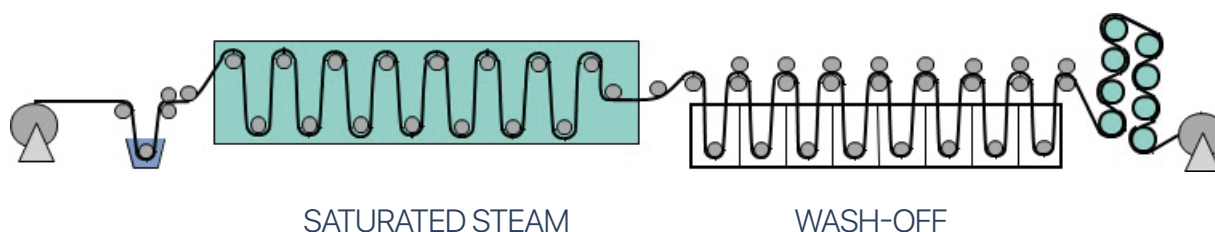
Benefits

- **Excellent wetting and anti-foaming power.**
- **Appropriate for water repellent finishing.**
- **Scouring, desizing and bleaching by continuous process, as a wetting and antifoaming agent.**
- **Very appropriate for application in Jet and High turbulence machinery.**
- **It operates as air-removing agent in padding baths.**
- **Silicone free.**

x g/l	Polyfunctional Reactive Dyes
2-4 g/l	Deterwet MK
5-10 g/l	Oxidol PTR Liq.
5-10 g/l	Sodium Bicarbonate
5-10 g/l	Soda ASH



60-90 seconds



Pad-Steam process - Polyfunctional Reactive dyes



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Permacal SP

DISPERSING AND SEQUESTERING AGENT

Special compound with levelling, dispersing and sequestering properties, appropriate for dyeing, soaping and bleaching of all kind of fibres in general. It does not sequester metals contained in dyestuffs. It does not produce foam.

Benefits

- **Dyeing with reactive, vat and sulphur dyestuffs**
- **It improves penetration, levelling (dyeing) and in the most cases fastness in general**
- **Dyeing with direct dyestuffs**
- **Dyeing with disperse dyestuffs**
- **It improves dyestuff dispersion level**
- **It reduce reproduction and precipitation problems during reactive dyeing due bad water quality**
- **Dye shade is not significantly influenced, thanks its levelling action**
- **It emulsions impurities avoiding problems with the background colours, bronzing, centre-selvage, ect.**
- **It disperses calcareous precipitations**
- **It is suitable for all kind of machine**
- **The dispersing and dye solubilising properties are especially helpful when dyestuffs of large molecular size are used**
- **Soaping with reactive, vat dyestuffs, etc.**
- **Chemical and optical-chemical bleaching**
- **It improves Peroxide stability**
- **It improves reproducibility of discontinuous reactive dyeing of natural and regenerated cellulosic fibres and blends**



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Deterwet A-MI

MIGRANT INHIBITOR

Migration inhibitor in pad dyeing of cellulosic fibres and their blends.

Benefits

- It increases pick-up
- It retards the migration of dyes during drying processes.
- It promotes levelness (side-to-side).

Dye Pad

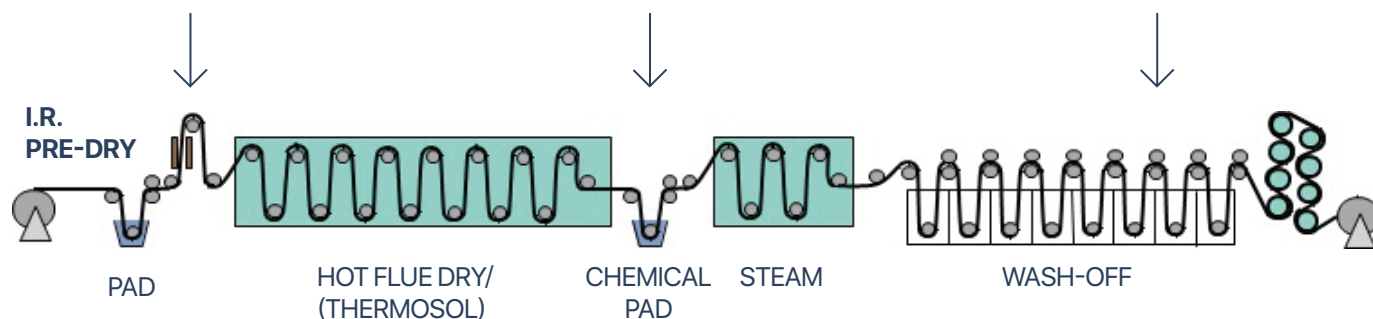
pH < 7,0
check Bicarbonate
Reactive dyes
2-3 g/l DETERWET MK
10-20 g/l DETERWET A-MI
5-10 g/l OXIDOL PTR LIQ.

Chemical Pad

(same recipe for
Reactive dyes)
250 g/l salt
20 g/l Soda ash
3-6 ml/l NaOH 50%

Wash Off

2-4 g/l DETERSOLV CA 85
(soaping agent to remove
unfixed dye)



Pad-Dry-(Thermosol)-Pad-Steam - Reactive dyes

Oxidol PTR Liq.

DYEING ASSISTANT

It avoids reduction of reactive dyestuffs, during dyeing processes with cellulosic fibres especially Viscose, or protean fibres such as Wool and its mixtures with cellulosic fibres.

Benefits

- **The oxidation process is less sensitive to pH variations than with Peroxide.**
- **Reproducible results in the oxidation of vat dyeings.**
- **It prevents the reduction of reactive dyes during steaming processes.**



Permacol OP/BD

SOAPING AND SEQUESTERING AGENT

Non foaming soaping and sequestering agent in concentrated form, with dispersing and colloid protective properties.

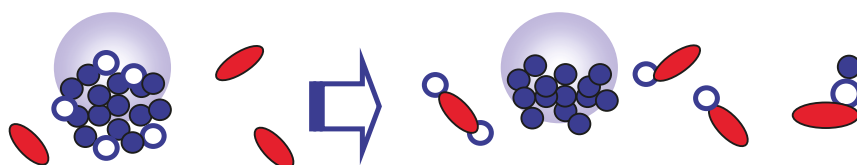
Benefits

- It improves the stability to hard water in case of sensitive dyes
- It prevents the precipitation of Calcium and Magnesium insoluble salts
- It acts as dispersing against insoluble substances
- It does not interfere with metal complex dyes
- It helps to remove the unfixed dyes (in particular the reactive dyes during soaping process)
- It is suitable for application in washing off dyeing and prints with reactive, vat, Sulphur dyes, improving rubbing and wet fastness properties
- It improves the depth, levelness and fastness properties of the dyeing
- It is suitable for application by exhaust, pad batch or continuous methods
- It can help to sequester the hardness-forming salts and insoluble substances, during scouring process



- 2g/l PERMACOL OP/BD
- 1g/l PERMACOL OP/BD
- 2g/l COMPETITOR'S PRODUCT
- NO SOAPING AGENT

Interactions into the soaping bath



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Dispersolo WS Liq.

DISPERSING AGENT

Anionic dispersing agent for disperse and vat dyes

Benefits

- Dispersing agent for disperse dyes on PES, PA, CA, and their blends
- Dispersing agent for Cotton dyeing with vat dyestuffs and their leucoesters
- Posterior, reducing soaping off in Polyester dyeing
- Appropriate together with PERMACOL OP or PERMACOL DC, in washing-off, of reactive dyeing, so much on cellulosic fibres as PES/Cellulosic fibres
- For oxidation in the presence of Sulphuric acid and leuco-soluble dyestuffs

Dye Pad

pH < 7,0
(adjust with Acetic acid)
VAT dyes

2-3 g/l DETERWET MK
5-20 g/l DETERWET A-MI

Chemical Pad

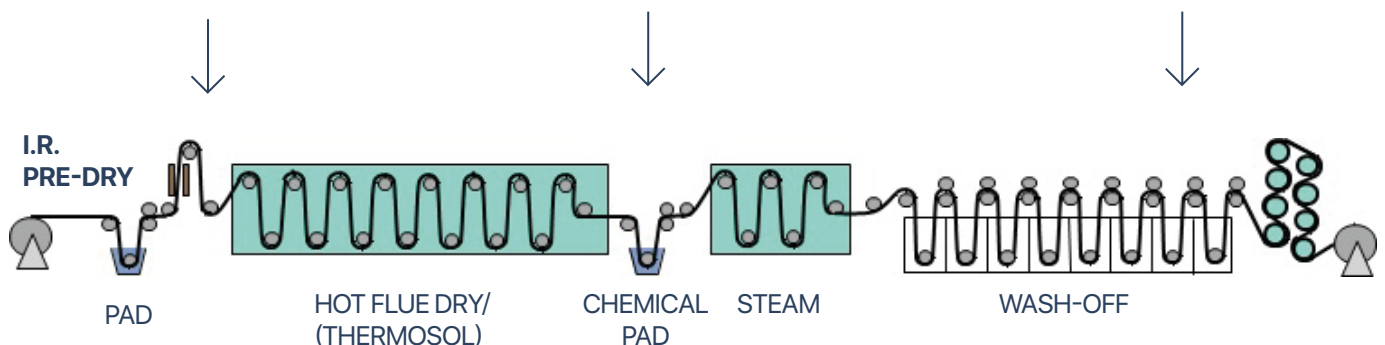
x g/l Hydrosulfite
y ml/l NaOH
1-2 g/l PERMACOL OP/BD
1-2 g/l DISPERSOLO WS LIQ.
(1-2 g/l PERMACAL SP)

Oxidation

2-3 ml/l H₂O₂ (35%) or
20-25 g/l OXIDOL PTR LIQ.

Soaping

1-2 g/l PERMACOL OP/BD



Pad-Dry-(Thermosol)-Pad-Steam - Vat dyes

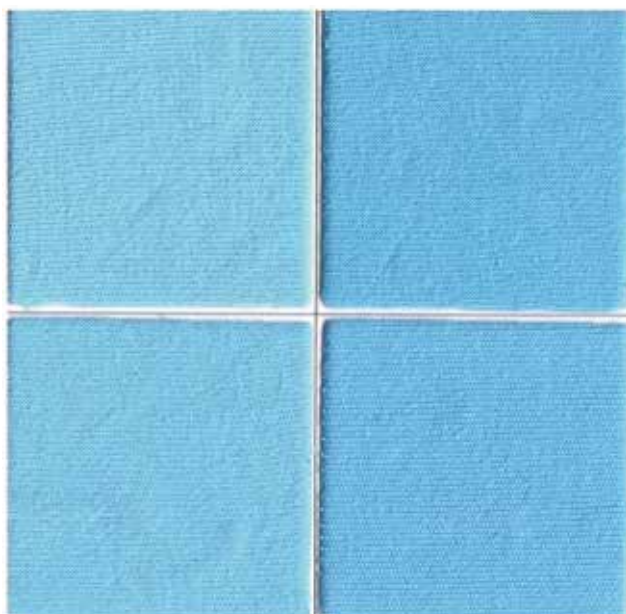
Detersolv CA

SOAPING AGENT

High effective concentrated soaping agent with dispersing properties for later treatment of dyeing and printing.

Benefits

- **Reactive dyestuffs soaping in continuous and discontinuous process.**
- **Low foaming**
- **Applicable to reducing washing process after dyeing with dispersing dyestuffs**
- **Reducing water consumption**
- **It is especially indicated for later treatment of PES-Lycra articles, improving washing fastness with solvents.**
- **Its great dispersing and anti-backstaining power makes the product highly effective in later washing of vat and Sulphur dyestuffs dyeing.**
- **Suitable for later printing washings made with soluble dyestuffs**
- **It prevents the redeposition and re-exhaustion of unfixed and hydrolysed dyestuffs onto fibre.**



→ WHITE FABRIC

→ HYDROLISED DYE DYENG

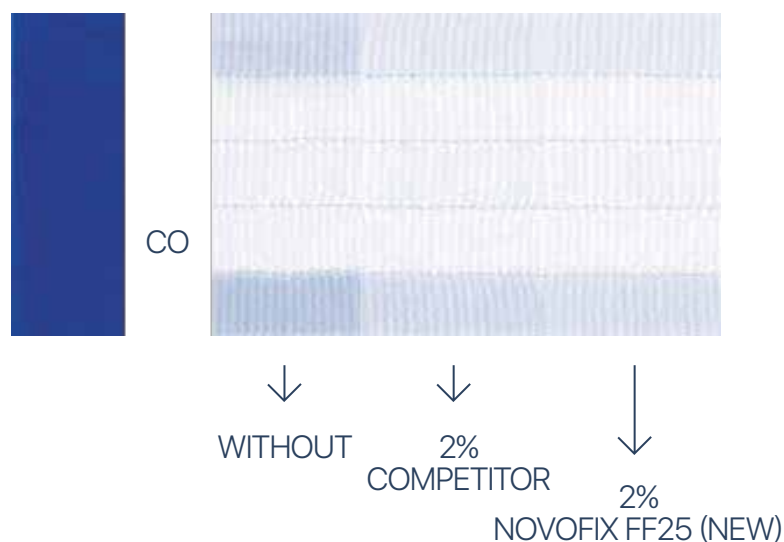
Novofix FF25

FIXING AGENT

Formaldehyde free fixing agent for direct, reactive and Sulphur dyestuffs.

Benefits

- For use in all articles where the use of Formaldehyde is not allowed by different legislations
- It increases fastness for direct and reactive dyestuffs
- It may be applied by exhaustion or foulard processes
- It can reduce the washing time, reducing water and energy consumption
- It can be used with NOVANTIC and NOVAWASH series



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Novofix CT/HYD New

FIXING AGENT

Formaldehyde free fixing agent for direct, reactive and Sulphur dyestuffs.

Benefits

- **For use in all articles where the use of Formaldehyde is not allowed by different legislations**
- **It increases fastness for direct and reactive dyestuffs**
- **It may be applied by exhaustion or foulard processes**
- **High stability in a wide range of pH making feasible to apply it by continuous processes after dyeing with reactive and Sulphur dyes.**
- **It does not affect the dyeing shades**



→ WITHOUT FIXING

→ COMPETITOR

→ NOVOFIX CT/HYD NEW



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Noamin OT/Base OT Conc.

CONCENTRATED CATIONIC SOFTENER

Highly concentrated softener for natural and synthetic fibres.

Benefits

- **Suitable for softening of cellulosic and synthetic fibres**
- **It may be used on whites due to its low yellowing**
- **Low thermo-migration impact**
- **Suitable to be applied on denim articles**
- **It is suitable for pad and exhaust application**
- **Low-foaming product**
- **It imparts very soft handle**
- **Cationic softener**
- **It can be mixed with Silicone or other softener**
- **It does not change shade or slightly change**
- **Good hand feeling**



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Base WHI-Z

SOFTENER

Universal softener especially recommended to treat bleached articles.

Benefits

- **Manufacturing of viscous liquid softeners.**
- **Softening of CO, PES/CO, CO/PAN.**
- **Very appropriate for whites.**
- **Very appropriate for towelling as it maintains hydrophilicity.**
- **Mixtures can be made with Aminosilicones to improve touch principally with MICROFINISH W, maintaining white and hydrophilicity quality.**
- **It is appropriate for exhaustion and continuous processes.**
- **It facilitates raising and brushing.**
- **It has anti-static effect.**



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Microfinish BP/20

LUBRICATING PREPARATION / SILICONE EMULSION

Silicone microemulsion based softener appropriate for exhaustion and continuous process. Appropriate on all types of fabric.

Benefits

- **It gives smooth and soft handfeel**
- **It improves sewing**
- **It improves the anti-wrinkle effect**
- **It can improve elasticity and touch**
- **It can be applied on all kinds of fibers, natural as well synthetic**
- **It has good stability**
- **It can be diluted easily with water**
- **It can be applied by exhaustion, by spray and padding**
- **It can be suitable to be applied in atomized/nano bubble system**
- **It can give slippery effect**
- **Good for sportswear**
- **Good for micro PES.**



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Macrofinish MAW

MACROEMULSION

Macroemulsion of aminofunctional Silicone
for exhaustion and continuous processes.

Benefits

- **It is suitable on all kinds of natural and synthetic fibres.**
- **It can work in exhaustion and continuous processes.**
- **It gives soft touch and elastic hand.**
- **It improves the friction coefficient.**
- **It increases sewing facility.**
- **It is suitable to be added in recipes for wrinkleproof and unshrinkable finishings on PES, CO and its blends.**
- **It is low yellowing on fabrics.**



Noamin PE/N (Special type softener)

SOFTENER/LUBRICANT

Softener/Lubricant based on non ionic Polyethylene emulsion.

Benefits

- **Additive for finishing to improve mechanical properties**
- **Good compatibility with finishing resins like glyoxalic, polyurethane, acrylic, etc.**
- **Improving the friction coefficient**
- **It can improve sewing conditions**
- **Smooth and dry touch**
- **It can be applied in combination of micro-Silicone, macro-Silicone or cationic softener**
- **Improving resilience**
- **It can be used as yarn lubricant**
- **It increases the brightness of color shade**
- **It can be used as yellow cutter**
- **It increases the whiteness of yarn after OBA application**
- **Good hand feeling**
- **Excellent sewability.**



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Intense CEL Plus

FINISHING AGENT

Universal softener especially recommended to treat bleached articles.

Benefits

- **Especially appropriated for dark shades, in which visual intensity wants to be improved.**
- **In black and dark shades the intensity increase can be evaluated around 30%.**
- **It gives soft and sustained handle.**
- **Easy application, alone or mixed with reactive resins to obtain "easy care" finishings.**
- **It decreases abrasion effect during "Stone Washing".**



UNTREATED



TREATED WITH
INTENSE CEL PLUS



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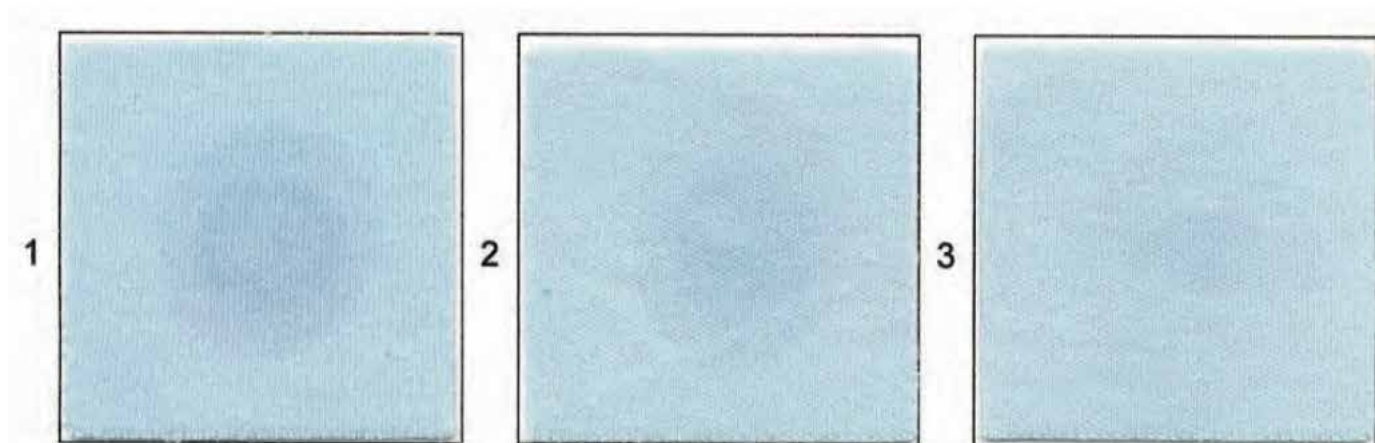
Remover SIL New

DETERGENT

Detergent for specifically removing Silicone stains.

Benefits

- **It is a low foaming agent**
- **High scouring properties**
- **It is APEO-NPEO free**



BEFORE TREATMENT

WITH CONVENTIONAL
DETERGENT

WITH REMOVER SIL NEW

Novofix WRI-S

SPECIAL FIXING / FINISHING AGENT

It is a special fixing/finishing agent to increase rubbing fastness for all kinds of Cotton fabrics. It is suitable to improve rubbing fastness especially on dark shades dyed with Indigo, Sulphur, Reactive and Pigment.

Also it can be applied to improve rubbing fastness on printed fabrics.

Benefits

- **It can increase 1 to 2 points wet rubbing fastness**
- **It can be applied with other finishing products, but previous test is recommended.**



Novafast BHT/M New

FINISHING AGENT & FIBER PROTECTOR/WASHING PREPARATION

Auxiliary for protection against Polyamide fabric yellowing caused by phenolic anti-oxidizing agents (BHT) during storage.

Benefits

- **Butylhydroxytoluene (BHT) based anti-oxidizing agents, used in manufacturing plastic film for packaging.**
- **It can cause yellowing in white or pastel shaded Polyamide.**
- **NOVAFAST BHT/M NEW applied to Polyamide can avoid this phenomenon.**
- **It can be applied by exhaustion or continuous processes together with optical bleaching agents.**
- **It can be applied also on Cotton as protector; previous test is recommended.**



UNTREATED



TREATED WITH
NOVAFAST BHT/M NEW

Novapret AP-V Plus

FINISHING AGENT

Compound to obtain stiff handle effect on fabrics.

Benefits

- **Paper touch finish giving rigid consistency in any fibre**
- **Appropriate for white and coloured articles**
- **Selvage Sizing**
- **Giving consistency on knitwear**



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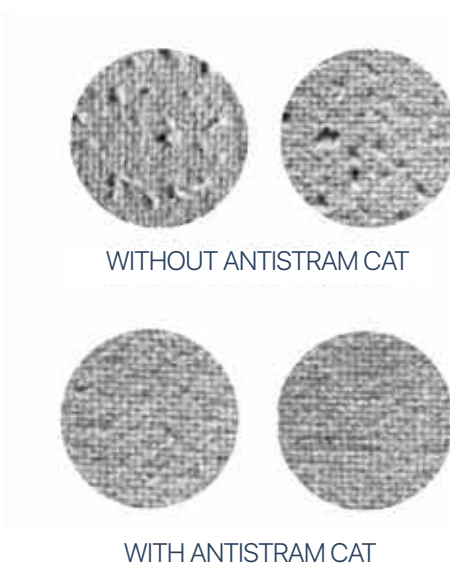
Antistram CAT New 600/ Antistram CAT

SPECIAL FINISHING AGENT

Special agent to increase traction resistance. It can work als as elastane fiber protector.

Benefits

- **Anti-pressing off:** it avoids the threads moving within fabrics which, due to its texture, density or thread characteristics, produces this tendency.
- **It increases traction resistance:** incorporating ANTISTRAM CAT to the finishing formula noticeably improves fabric resistance.
- **It can be used, as well, in synthetic thread spinning processes** when cationic spinning oils are used, improving thread resistance and avoiding their latter movement within the fabric.
- **Soil release finishing:** it may be added to this kind of finishing without harming its qualities.



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