

# Sustainable

GARMENT PROCESSING, DYEING AND FINISHING





## A CIRCULAR BUSINESS

In contrast to non-sustainable and non-renewable stoichiometric chemicals, oxidants with potential risk of exposure to handling, storage and transportation, fossil fuel and polymer based products, synthetic resins etc, we have introduced green chemistry with highly-efficient (fewer steps, fewer resources, less waste) more stable (under ambient conditions) and eco-friendly enzyme based (platform chemicals) products, synthesized natural organic products and synthetically developed renewable molecule compiled with bio chemicals etc.. It's our resolve to design and develop high performance chemical products from environmentally benign bio and organic chemicals. One major aspect of it is biological persistence focusing on the replacement or degradation of xenobiotic in the environment. The "environmental xenobiotic" is summarized as the strategies to use single bacterial isolates or microbial communities for the development of products which can substitute the arrival of xenobiotic pollutants in the environment. It's by selectively identifying the catabolic potential of microbes and detecting its application relevancy in the set conditions (i.e. systems/procedures) of Garment processing & Finishing. We pursue Green Chemistry to deal with the bitter pills of garment wet processing and finishing, which is focused on.



# VEGAN CLOTHINGS

No harmful chemicals, No animal products



Every chemical products we list here is vegan. There is a special place in our hearts for brands who have committed to being 100% vegan clothing and can do all supports needed for the dyeing, processing and garment finishing with chemicals products have no animal products in formulation and packaging. These are for the brands that have taken a stand and are either certified vegan, or publicly commit to being 100% vegan.

The chemical products created without having ingredients or packaging materials made from or derived from animals. Products are created without animal- testing or having raw materials that are tested on animals.





## Why Vegan ?

- Nontoxic and bio degradable.
- Vegan friendly.
- No animal origin products
- No animal tested products
- Completely sustainable and non-pollutants.
- Synthesized or derived from plantwaste or sustainable organic materials.
- Low consumption of energy, finite resources and high productivity oriented.

Animal waste contribute a major source of pollution. This is majorly from waste of animals after processing, Antibiotics and hormones, chemicals from tanneries, fertilizers and pesticides used for feed crops etc.

- Malnourishment in the developing world
- Water scarcity
- Pollution
- Deforestation
- Species extinction
- Land degradation
- Global warming / carbon foot prints.

Livestock contributes up to 51% of all global greenhouse gases. 37% of all methane emission comes from cattle faming. On an average, a dairy cow belches 500lts of methane every day. By avoiding animal based products we can reduce substantial carbon emissions.

## NOVOSIZE OXY

De-size or pre-treatment product for denim garment processing combined with ABS, lube and dye suspending agent. Highly sustainable product developed from natural/ synthesized agro-waste. The processes can be combined with enzyme wash.

- One shot organic de-sizing formula which performs better than combination of chemicals in the enzymatic de-sizing process eliminates dye suspenders, modified amylase, lubrication agents, anti-back staining agents etc.
- In addition to cleaving the starch molecules in the alpha 1, 4 linkages, it can cleave the ring structure as well, providing smaller fragments. It also cleaves PVA sizes, formaldehyde and synthetic fixers which cannot be de-sized by enzymes.
- This process is considerably faster than conventional process and saves time by combining both de-size and enzyme bath.

## ECOLITE GC

Specially developed pre-treatment product for denim with built in de-size, ABS and PP neutralizer in one shot. This can save time energy and makes the process simple. This is absolute innovation in sustainable chemistry where substantial time and utility can be reduced.

- Dyes are adsorbed from the fabric and the liquor due to high specific surface area attributed by layer clay and CMC.
- Increased abrasion performance by the enzyme by imparting friction.
- Na+ content in the layer clay works dual effect as colour extractant and clean up agent.

## NOVO ANTISTAIN PC

100% natural anti back-staining agent developed from structural modified CMC from sugar cane agrowaste and natural dehydrated layer clay.

- The PP neutralization can be done in the de-size bath.
- Built in ABS, de-size and lube.
- Save utility, time and makes the process simple.

## NOVO E 888

High abrasion non-GMO rigidified neutral alkaline cellulase enzyme. This Hetro- functional neutral cellulase enzyme developed for high abrasion and a replacement of pumice stone. The product is having excellent strength retention and grey cast with lowest back-staining.

- Very minimal strength loss and highly abraded looks.
- High abrasion with low back staining makes it relevant for the replacement of pumice stone.
- Immobilized cellulase developed from native species-(NON-GMO)

## BIO LITE CRYSTAL

Novo Biolite Crystal is a combination of immobilized cellulase, xylanase, mannanase, high wetting and dispersing agent, natural surfactants etc to have sustainable zero water abrasion finishes. Highly sustainable garment finishing process with substantial water saving. This product allows the wash down effect of sulphur and indigo dyes. High abraded finish replaces the usage of pumice stone and synthetic abrasive products. This process is done at low temperature.

- High abrasion and stone washed look.
- Zero water processing
- Soften the fabric with excellent abrasion & fuzz cutting.
- Very minimal back-staining.
- Excellent strength retention.
- No pH adjustment.
- Preserved fabric strength and weight.
- Non-GMO enzymes.

## NOVOWASH ESL PLUS

Novel neutral cellulases developed from native species without altering DNA (NON-GMO) and food grade anionic dyes structural modified for high substantivity with cellulosic fibres. This next generation dyeing method is simple, user friendly and potentially consume very low quantity chemicals and utilities.

The colour binding to the chromophore is designed with carbohydrate binding domine part of enzyme protein which hold the hydrophilic dyes in molecular level which is been fixed by the bath conditions attributed by the other ingredients in the formulation.

This is absolutely new technology or a new way of looking up to the cellulosic textile colouring process. This process will ward off most of the inorganic or non-biodegradable auxiliaries being used in conventional method like salt, soda ash, surfactants, acids, phosphonate sequestrants etc. makes this safest and most economical colouring method. There can be pit falls like variants of colour availability, very dark colours .etc, this unique method can be taken as an option for light and medium shades. This process offers many advantages commercially and environmentally with very low exposure hazard.

### Benefits:

- Easy process method.
- Excellent colour depth and fastness properties.
- Soft the fabric with clean surface and fuzz cutting.
- No dye hydrolysis issue.
- Less chance of uneven dyeing.
- Less process time need to get the desired colour depth.
- High strength retention.

### Economical level:

- Low inventory
- High-cost reduction in ETP maintenance.
- Huge reduction in utility expenses.
- Huge saving in chemical storage space.
- Substantial reduction in process time and man hour.

### Ecological:

- AOX, TOX and other xenobiotic pollutant free dyeing.
- High quality effluents.
- Salt, soda and surfactants free dyeing reduces high TDS in effluent.
- Surfactant free – reduces foaming issues in effluent.
- Maximum colour exhaustion reduces the colour contamination in effluent.
- Reduces effluent quantity to treated due to reduced water consumption.

## NOVO WASH NBL 1600

High-strength retention neutral bio-polishing/bio-stoning enzyme liquid. The low temperature neutral liquid bio-polishing and bio-stoning enzyme developed from the same strain for a highly polished and abraded looks in denim and polished look without loss of colour in solid dyed garments. The neutral the working condition helps to save time utility and energy by combining bio-polishing and dyeing in one bath.

- It gives an exceptionally clean fabric surface on denim garments with increased colour brilliance due to the removal of fuzz.
- Low back staining and high abrasion for denim and dyed chinos.
- Modified for auto-dispensing and fog application (nano molecular mist)
- High strength retention.

## BLD 520

Highly concentrated liquid rigidified cellulase works well in both acid and neutral conditions. This enzyme is specially developed to work in both acid and neutral conditions, enabling it for denim and non-denim, fabric applications. For denim garment processing this is extremely safe to use for high-stretch fabric that needs high abrasion and light bleach.

- BLD 520 in neutral conditions give excellent abrasion and semi-bleach look. with high strength retention and an exceptionally clean look.
- Bio polishing can be combined with dyeing in fabric solid dyeing.
- BLD 520 will reduce the bleaching exposure of the garment resulting in the high stretch and strength retainability.
- This product is modified for E –flow machine for heavy stone washes.
- Denim it can give semi-bleached looks.

## NOVO FINISH PF

Spandex protection, tearing strength and seam slippage improver, rubbing fastness and ozone protection, light fastness improver. One point solution for the most of the vexing issues associated with denim and solid dyed garments and linen fabric. Plant based homo polymer with oleophilic properties protect hydrophobic yarns in the garments.

- Improves light fastness.
- Protect spandex and sewing threads.
- Ozone fastness.
- Improves strength, seam slippage
- Improves washing fastness & improves crocking fastness.
- Increases tensile strength.

## NOVO LP 70

LP 70 is a homo polymer used to protect spandex and stretch during denim processing. Garment strength retention, improves elastomeric properties, control shrinkage and improve yarn anti sliding properties, improve fabric softness, sewing strength and colour fastness.

- Protect spandex and improve stretch.
- Resist pilling.
- Shrinkage control
- Anti-slipping agent
- Enhance fabric smoothness.
- Improve fastness properties

## NOVOFADE ACTIVE

Enzymatic replacement of hydrogen peroxide. Safe and sustainable option enhanced by enzymes to replace hydrogen peroxide. Excellent for sulphur denims peroxide-based bleaching and colour down effects.

- Safe and sustainable
- Easy storage and transportation.
- No zipper damage or uneven finish.
- Excellent scouring or bleaching agent.
- Post washing for stone replacement in denim.
- Novofade control is recommended for PH buffering.

## BIO BRIGHT O2

Post washing detergent which can effectively remove the re-deposited indigo, residues of chlorine, manganese dioxide or any other chemical residue left on garments during processing. The product is designed by using enzyme as the platform chemistry and organic components as additives. By the application of this product before softening will protect the garments from storage yellowing.

- Prevent storage yellowing.
- Safe and sustainable product.
- Post washing improves light and ozone fastness.
- Improves colour fastness.
- Brightens the high low effect on denim.
- Improves the laser effect by post washing.

## NOVOCHLORE NEUTRA

It's a one-shot safe neutralizer for chlorine and potassium permanganate induced bleaching and finishing in garment processing. Novochlore Neutra can substitute inorganic hazardous reducing agents and its potential impact on garment attributes like tensile strength and stretch recovery.

- The complete neutralization ensures reduced ozone damage, non-yellowing and good tensile strength retention.
- Chlorine and PP neutralizer.
- Organic and safe formula.
- Safe discharge and high dose response.
- Excellent clean-up of residual indigo dyes.

## DENI FADE BE 700

Safe colour reducer for indigo and sulphur. Natural mud-based colour reducer for indigo and sulphur. This can be applied by spray or direct in the machine.

- Safe to use for local discolouration.
- Can be applied by spray and exhaust methods.
- Safe to bleach indigo
- Product with a natural base material.

## MAC 52

MAC 52, advanced next generation oxidation bleaching technology which offers mild, safe and stabilized bleaching of indigo dyes. Unlike conventional bleaching method this is safe and substrate friendly. Sufficient oxidation reaction in presence of moisture or water can be attained within 10 minutes. Advanced oxidation process (AOP) of MAC 52, to generate very strong reactive free radicals which are capable of bleaching indigo dyes and to control the oxidation in perfect reaction equilibrium.

- Next generation bleach
- Very safe for textiles
- Buffered for hardness and metal chelating
- Very safe for spandex denim
- Excellent stability for storage
- Thermal decomposition resistant
- Safe and substrate friendly
- Offer better bio security

## SAFEX

SAFEX is a storage stable, free flowing and thermal de-composition resistant stabilized bleach donor in the bleach bath. The HOCl formed is stable in water for a long time than other bleaches. When the product is dissolved in water, it rapidly hydrolyzes to release free available bleach, establishing a complex series of equilibrium involving six chlorinated and four non chlorinated isocyanurates. It will rapidly dissociate and continue to release HOCl for the bleaching.

- Spandex safe bleach
- Very safe for textiles
- Buffered for hardness and metal chelating
- Very safe for spandex denim
- Excellent stability for storage
- Thermal decomposition resistant

## OBAS 610

OBAS 610 is a special auxiliary to remove the OBA from cotton and cellulosic-rich fabrics. It can also strip the anionic-dyed cellulosic fabrics for re-dyeing. It can completely remove the OBA from the fabric surface after stripping treatment. OBAS 610 works as an excellent stripping agent for reactive dyes and other anionic dyes on cellulosic or its blends. Traces of OBA or dyes residue present in the machine can interfere in subsequent dyeing leading to stains or shade changes. These residues are successfully removed before dyeing by using OBAS 610. The product needs to be washed off well with Novochlor Neutra After stripping.

- Excellent stripping agent for OBA and reactive dyes from cellulosic fabrics.
- Complete OBA can be removed without traces.
- Minimal effect of fabric shade when re-dyeing.
- Easy application.
- No adverse effect on machinery or substrates.
- Safe formula.

## WETOL 90

**One shot sequestering, levelling agent for cotton and synthetics.**

Surfactant-free sequestering and levelling agent for efficient bleaching and dyeing in the fabric and garment wet processing. Works well for both cotton and synthetic. This will work well as sequestering, wetting, chelating, anti-crease, dye levelling, buffering and humidifying agents for the dyeing of anionic dyes.

- Improves solubility of dyes.
- Excellent buffering action for stabilizing alkali throughout the dyeing process.
- Reduces the strike rate during dye exhaustion.
- No effect on the metal ions in the dyes.
- Low foam product.
- Works well in natural and manmade fiber 100 processing.



## BIO GRUN

Eco-friendly, 100% Sustainable Green Screen Certified Laundry Powder Detergent Developed With Safe Surfactants And Green Ingredients. Bio Grun Contains No Synthetic Surfactants, Phosphates Or Phosphonates, Inorganic Alkali And Synthetic Perfumes. The Scent Is Developed From Pure Essential Oil. Safe To Discharge On Bio Based Water Treatment Plants.

- Completely replace inorganic alkalis used for the pre-treatment ( yarn) and dyeing of all kinds of reactive dyes and sulphur.
- The hassle associated with solid residue in the case of soda ash can be completely eliminated.
- Uniform levelling in the dye uptake during the alkaline stage and the secondary exhaustion is well controlled without the usage of any additional levelling agent.
- Excellent results on the darker shades of red, navy, burgundy, turquoise and black.

## AELTEX PW 106

Scouring agents completely eliminate the usage of caustic soda, surfactants and polymers from the pre-treatment process. Improved wettability, whiteness index and one-bath bleaching possibility make it a very economical process with a substantial saving of water, and 2- 3% process realization in scouring.

- Organic one shot pre treatment process for cellulosic, synthetic and fabric blended with elastane.
- Washing of all kind of fabrics.
- Gray state dyeing ( cotton, blended and elastane knit goods).

## SAFEX

SAFEX is a storage stable, free flowing and thermal de-composition resistant stabilized bleach donor in the bleach bath. The HOCl formed is stable in water for a long time than other bleaches. When the product is dissolved in water, it rapidly hydrolyzes to release free available bleach, establishing a complex series of equilibrium involving six chlorinated and four non chlorinated isocyanurates. It will rapidly dissociate and continue to release HOCl for the bleaching.

- Spandex safe bleach
- Very safe for textiles
- Buffered for hardness and metal chelating
- Very safe for spandex denim
- Excellent stability for storage
- Thermal decomposition resistant

## CELLO SCOUR VARIE

One shot liquid scouring agent. One shot scouring agent specially developed for the continuous dyeing process.

- Caustic-free processing.
- High savings in water and energy.
- High strength retention and surface appearance.
- Improves effluent quality and load.
- Surfactant-free processing.
- One shot process wards off the usage of wetting, sequestering and peroxide stabilizing agents.

## NOVOFADE CONTROL

Green alkali. Novofade control is specifically developed to support Novofade active as a buffer to maintain consistent pH throughout the process. Non dusty crystals ensure safe exposure.

- 100% green product.
- Safe alkali replaces caustic and soda ash.
- High dose response.
- Excellent alkaline buffer in dyeing.
- Alkaline booster.

## NOVOSOFT LV 90 EXTRA

It is an amphoteric charged poly alkyl ester of poly-hydric alcohol, modified and pre hydrogenated softener concentrated paste. This can be used as both non-ionic and cationic softeners. Non yellowing, anti-ozone and antistatic properties of it makes it unique for all type of garments and textiles. Very smooth handfeel with high moisture absorption and anti-static properties.

- Produces soft, silky and bulk handle with bouncy feel.
- Exhibits no tendency to sublimation.
- Does not influence the shade or fastness properties of dyed goods.
- Does not affect the whiteness of brightened goods.
- Minimizes the needle breakage and optimizes machine efficiency.
- Increases fibre lubrication and drape.
- Prevents static build ups.

## NOVOSIL EC 200 +

Specialised softener from natural non-ionic emollient blend consisting of decyl glucoside and sodium lauryl lactate in combination with poly hydric alcohol typically derived from sugar cane bagasse. 100% safe and sustainable product having excellent silky hand.

- Non yellowing
- Non ionic
- Hydrophilic
- Improved crease recovery and fabric elasticity.
- Improved anti-static properties.
- Excellent effect at low level addition.
- Stable on broad temperature level ( 40 – 90°C)
- Can be applied by pad, exhaust and spray method.
- Easily soluble in cold water.

## NEUTRASOFT NS 520+

NEUTRA SOFT NS 520+ is a modified polyhydric alcohol-based non-ionic softener derived from sugar cane bio-waste and enhanced the product to develop high resistance against UV light radiations and atmospheric ozone. Protective agent against ozone fading of denim with a very good soft handle. Denim garments tend to yellow or fade in the presence of atmospheric ozone and sometimes form yellow shade fold marks on the garments. Neutra Soft NS 520+ is well-engineered to develop sufficient resistance against UV light and Ozone on the garment surface. This product is recommended for denim, white cotton textiles, wool, silk, manmade & synthetic fibres, and, their blends. It imparts soft and silky handfeel and non-yellowing even at higher temperatures used for cotton finishing. It is specially developed to get an excellent hand feel without changing the color or hue of the garment and textiles.

- Excellent resistance to UV – A light radiation.
- High protection against atmospheric ozone-induced fading and yellowing.
- Highly recommended for white textiles and garments.
- Product is recommended for both exhaust and pad application.
- Produces a soft and silky hand for all types of fabrics.
- Exhibits no tendency for the sublimation of shade.
- Does not influence the shade or fastness of dyed goods.
- Minimizes needle breakage and optimizes machine efficiency.
- Easily soluble in cold water
- 100% from natural bio-waste source.
- GOTS and vegan-certified.

## WHEAT ACID

**Nature's own alternative to Acetic Acid.**

The lime-treated wheat straw or the process waste of wheat was hydrolyzed and fermented simultaneously to wheat acid by enzyme preparation and by the bacteria *Bacillus coagulans*.

- Natural replacement of acetic acid.
- Absolute purity and food-grade quality.
- Eco-friendly & organic
- No pungent smell or unpleasant odor.
- Low volatile in nature
- Enhanced hard water stability
- Effective in core alkali neutralization
- Excellent color yield in dyeing
- Safe to use in all stages of textile processing.

## NOVOSOFT CS 20+

NOVOSOFT CS 20+ is a vegan softener made out of natural emollients to replace ester quarts, silicone-based softeners, and synthetic finishing agents. Natural-based emollients are important ingredients to substitute silicones and ester quarts in softener formulations to impart a smooth, soft, moisturized feel to all kinds of cotton, manmade and synthetic fabrics, and garments. The emollients are those materials natural-based and chemically modified in any way. The product is exceptionally well for cotton towels and knitted active and sport wears.

- Non-yellowing
- Anti-ozone
- Hydrophilic
- Excellent for cotton, synthetics, and blends
- Improved crease recovery and fabric elasticity.
- Improved antistatic properties
- Excellent effect at low-level addition
- Stable over broad temperature levels (40- 90°C)
- Stable over a wide pH range ( 2 -11)
- Shows excellent stability with shear, electrolytes, and hard water

## NOVOSIL P 3000

NOVOSIL P 3000 is a non yellowing elastomeric Nonionic Silicone - Nano Emulsion used for the finishing of natural fibres, wool, synthetics, micro fibres and their blends. The product is specially formulated as a textile softener and lubricant. This product also can be used for the production of filling materials used in pillow and quilt production. It is an organic GOTS certified nano emulsion Silicone softener. It's softening capability comes from the silicon oil backbone's flexibility and its freedom of rotation along their bonds. This enables the low-interacting methyl groups to arrange themselves so that they face away from the surface of fibers, thereby reducing fiber-to-fiber interaction. Because the fibers are able to slip easily past one another, they do not stick together. Their natural spring is unimpaired. The fabric becomes fluffier and softer to the touch.

- Non yellowing-suitable for white textiles and garments.
- Non ionic & antistatic.
- Can be applied along with resins.
- Excellent for cotton, synthetics and blends.
- Improved crease recovery and fabric elasticity.
- Improved antistatic properties.
- Excellent effect at low level addition.
- Stable over broad temperature level(400 - 90°C).
- Stable over wide pH range ( 2 -11).
- Shows excellent stability with shear, electrolytes and hard water
- Can be applied by pad, exhaust or spray method.
- Easily soluble in cold water.

## NOVOSIL ULTRA HF

Novosil ultra HF is engineered to impart excellent wicking performance on the textile substrate. This provides additional comfort to wearers through moisture management by the excellent water and water vapour transportation. It is an essential feature in the range of active wear, work wear and knitted goods. It improves the drying performance keeps cool and gives comfort while wearing. Novosil ultra HF is suitable for cotton, protein fibers, polyester, polypropylene and polyethylene nonwovens etc. The finish property combines softening, wettability, anti-static, moisture wicking, quick drying, durability, and non migrating properties in to one molecule. The product is non yellowing and extremely safe to use on white fabric. The non ionic nature makes it compatible with other components that might be used during the finishing of nonwovens, wovens or knits.

- Durable hydrophilic finish
- Anti-static
- Moisture management
- Quick drying
- Water dispersible
- Low VOC
- Stability in alkaline environments, high temperature and under high shear forces.
- High degree of whiteness and minimal shade change on colored fabrics.
- Stable to metal salt and suitable for easy care finishes with resins.
- No influence on wet and dry soiling.
- Can be applied for both padding and exhaustion.
- Increases fabric resilience. Enhances easy care and easy ironing properties.

## NOVOSIL DE 520

NOVOSIL D E 520 is a non yellowing Elastomeric Nonionic Silicone - Nano Emulsion used for the finishing of natural fibres, wool, synthetics, micro fibres and their blends. The product is specially formulated as a textile colour softener and lubricant. NOVOSIL DE 520 is a colour blooming agent specially developed for enhancing shade of cotton, wool, polyester and their blends. It is especially suitable for black and navy-blue dyed fabrics. It imparts extra softness, colour enhancing and improved fixing properties. The depth consistency is maintained after repeated home launderings. It can also prevent bronzing effect on sulphur dyed materials. This is one shot process where there is no need for additional softeners.

- Significantly improves colour depth
- Suitable for natural, manmade and synthetic fibres.
- Improve the strength and fastness of the dyed viscose fabric
- Prevent bronzing effect on sulphur dyed fabrics.
- Extra soft finish and improve colour fastness.
- No tonal variation

## NOVO SUPER SOFT 016

SUPERSOFT 016 is the 4th generation organic GOTS certified micro-emulsion Silicone softener. Its softening capability comes from the siloxane backbone's flexibility and its freedom of rotation along the Si-O bonds. This enables the low-interacting methyl groups to arrange themselves so that they face away from the surface of fibers, thereby reducing fiber-to-fiber interaction. Because the fibers are able to slip easily past one another, they do not stick together.

- Superior softness, bulky and full rich handfeel.
- Moderate to excellent hydrophilicity.
- No fabric yellowing and discoloration compared to industrial standards.
- Re-dyeable, re-printable, over dyeable and re-coatable.
- Selected compatibility with DP resins.
- Improves fabric tearing strength.
- Very low dosage, superior cost performance.

## NOVOSIL GEL CONC

NOVO SIL GEL is a non yellowing Nonionic Silicone - micro Emulsion used for the finishing of natural fibres, wool, synthetics, Micro fibres and their blends. The product is specially formulated as a textile softener and lubricant. This product also can be used for the production of filling materials used in pillow and quilt production. This product is available in easily soluble gel form which can be diluted before application.

- Non yellowing
- Non ionic
- Can be applied along with resins after dilution
- Excellent for cotton, synthetics and blends
- Improved crease recovery and fabric elasticity.
- Improved antistatic properties
- Excellent effect at low level addition
- Stable over broad temperature level (40- 90°C)

## NOVOFIX FF

Novofix FF is a 100 % formaldehyde free dye fixing agent derived from nitrogenous condensates for the fixation of direct reactive acid and indigo dyes with excellent light wash and chlorine fastness. The treated fabrics or garments are protected from ozone damages to colour after washing.

- 100 % formaldehyde free
- Easily applicable by pad and exhaust
- No significant effect on shade after treating
- Improves the colour fastness to washing, crocking, light and ozone
- Prevents dye migration
- Gives ozone protection

## NOVOLUBE

N

NOVOLUBE is a fast acting humidifying and lubricating agent used for the processing of denims. This is well known for its wetting power and anti crease properties. This has to be used along with NOVOSIZE L, desizing alpha amylases. NOVOLUBE is a formulation based on non-ionic surfactants and humidifying agent to reduce the surface tension of water.

- Improved wetting properties.
- Lubricates the garments and avoids crease mark during de-sizing.
- Uniform removal of size particle enables uniform abrasion.
- Stable over a broad pH range.
- Shows excellent stability with respect to shear, electrolytes and hard water.

## NOVOLUBE

P

NOVOLUBE forms a thin uniform protective coating around the fiber to lower the surface friction and flexural rigidity, thus minimizing the formation of durable creases during high temperature garment wet-processing. It is very important to select chemistry of anti-creasing agents/lubricants with discernment. In a broad general sense lubricants enhance or promote fiber-to-fiber lubricity by lowering the coefficient of friction between the fibers and also fiber and metal.

- Improves abrasion resistant properties.
- Imparts good gliding effects and an excellent soft handle.
- Helps to remove oil based stains.
- Nonionic nature.
- Retains the strength of the yarn/ fabric/ garments
- It does not affect the shade or fastness properties of dyed yarn.
- Causes no yellowing of garments, hence any effect on whiteness of optically brightened materials.
- Bio degradable and eco friendly.

## NOVOLUBE

ULTRA AS

NOVOLUBE is a vegan softener made out of natural emollients to replace ester quarts, silicone-based softeners and synthetic finishing agents. Natural-based emollients are important ingredients to substitute silicones and ester quarts in softener formulations to impart a smooth, soft, moisturized feel to all kinds of cotton, manmade and synthetic fabrics and garments. The emollients are those materials natural-based and chemically modified in any way.

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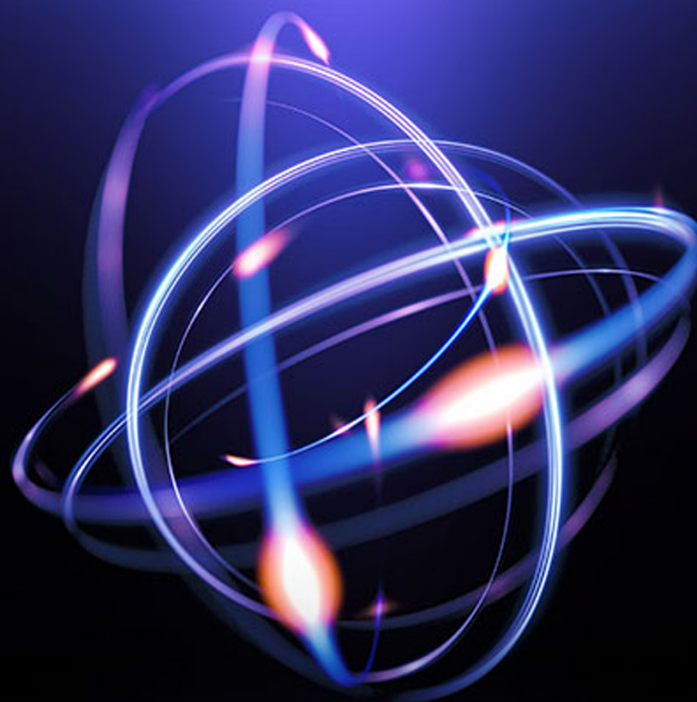
## NOVOLUBE

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- Non-yellowing
- Excellent yarn lubricant.
- Hydrophilic
- Excellent for cotton, synthetics, and blends
- Improved crease recovery and fabric elasticity.
- Improved antistatic properties
- Excellent effect at low-level addition
- Stable over broad temperature levels (40- 90°C)
- Stable over a wide pH range ( 2 -11)
- Shows excellent stability with shear, electrolytes, and hard water
- Can be applied by a pad, exhaust, or spray method
- Easily soluble in cold water





## ATOMIC PHYSICS

Atomic physics to work on a chemical concept is an idea that has remained confined to the drawing of electricity and running of equipment components and has elevated to chemical acceleration or atomic modification to alter the fiber morphology is the most sustainable innovation in this era. The interrelation of these two subjects and usage of this relationship, if exaggerated further, are bound to bear unprecedented intellect in Garment Washing Industry and fabric dyeing industries. Our product line reflects this intelligent effort to in bringing in sustainability. Like icing on the cake, you would find it interesting to know, as part of Atlantic innovations, that, the concept of PHYSICS such as motion, energy, colloids time, atomic physics, and fluid physics like "stable dry foams", colloids etc play an important role while CHEMISTRY does its job in a Wet Process.

### CELLO WASH EMF

### Protonate PX9

Using atomic physics to alter cotton fiber morphology to enhance indigo bleaching

Concentrated liquid molecular catalyst CELLOWASH EMF is designed for catalyzing the bleaching action by the orientation and enhanced polar attraction by the HOCl- towards indigo denim fabric. Due to the increased polar attraction towards the fabric by the Nascent HOCl – ions resulting in enhanced bleaching in a much faster and stabilized way. The advantage of this protonation method by Cellowash EMF is that the denim articles can be bleached will substantially low quantity bleach, time, and with high reproducibility. The hypochlorite load on the wastewater is significantly lower than in the conventional process.

#### BOTTOMLINE BENEFITS

- 50% reduction in chlorine bleach concentration.
- The controlled bleach equilibrium in the bath gives a highly-abraded look.
- Reduced fabric damage.
- Protect fabric strength and spandex.
- Improved productivity
- Less load on effluent.
- Reduced quantity of antichlor.
- Stabilize the bleach in the bath and enhance consistent bleaching.
- High shade consistency.

# SUPER CONCENTRATED

## BLD 520

Super concentrated certified non GMO immobilised liquid neutral enzymes  
Unique enzyme concentrates for the defibrillation of fabrics under neutral process conditions. Works well at low temperature and this process can be combined with dye bath. Excellent defibrillation of finished goods with very minimal strength loss and improves the dyeability of treated fabric.

3% formulation - Dosage 1.5 – 2 %

6-8 % formulation - Dosage 0.7 – 1 %

## NOVO ANTISTAIN PC

De-hydrated natural clay and agro waste based CMC as an alternative to polymer or surfactant based anti-back staining agent.

This product is a combination of natural agro-waste synthesized CMC with nano clay, having excellent ABS properties, enhance cellulase performances. This is highly concentrated product having excellent anti-back staining property and dye dispersing power. Novo anti stain pc improves the denim abrasion, support anti redeposition and clean up. The product is made in combination with layer clay and sodium carboxy methyl cellulose structural modified to for denim processing.

- High performance anti back staining agent form natural source.
- Synthesized product from agro-waste.
- Surfactant free
- Polymer or monomer free.
- Excellent dye dispersant and chelatent .
- Excellent product stability in denim process conditions.

8% formulation - 0.8 - 1% Dosage

13% formulation - 0.5 - 0.6% Dosage

## NOVO SIL GEL CONC

Micro emulsion silicone gel for dilution and use

NOVOSIL GEL is a non yellowing super concentrated Nonionic Silicone - micro Emulsion used for the finishing of natural fibres, wool, synthetics, Micro fibres and their blends. The product is specially formulated as a textile softener and lubricant. This product also can be used for the production of filling materials used in pillow and quilt production.

- This product is in easily soluble gel form which has to be diluted before application.
- Please refer the Technical data for dilution guidelines.

## NOVO E 888

Super concentrated certified non GMO immobilised powder neutral enzymes  
Super concentrated neutral powder enzyme for denim garment abrasion finishes. This unique liquid neutral enzyme developed for the defibrillation (bio polishing) of indigo and other ring dyed garments with very minimal abrasion effect and strength loss. This could create new looks and feel on denim garments. This product is highly cost efficient which works well at low temperatures and wide pH conditions. Excellent feel, shine and with exceptionally clean fabric surface.

3% formulation - Dosage 1.5 – 2 %

6-8 % formulation - Dosage 0.7 – 1 %

## NOVO SOFT LV 90 EXTRA

High performance fabric softener from renewable resources of vegetable origin  
NOVOSOFT LV 90 EXTRA - C is a modified softening agent in concentrated paste form. The product is amphoteric charged, becomes cationic with acid pH to impart extra hand feel without affecting the whiteness and shade of fabric. It imparts a very smooth hand with high moisture absorption and anti static properties. The product is also having non yellowing properties which makes this product ideal for denim garment washing. The product is 100% vegetable origin and comes in Vegan class.

- 93.5% super concentrated product.
- Please refer the Technical data for dilution guidelines.

## LP 70

Spandex protector, shrinkage control and anti-pilling agent.

LP 70 is a homo polymer used to protect spandex and stretch during denim processing. Garment strength retention, improves elastomeric properties, control shrinkage and improve yarn anti sliding properties, improve fabric softness, sewing strength and colour fastness.

- Protect spandex and improve stretch.
- Resist pilling.
- Shrinkage control
- Anti- slipping agent
- Enhance fabric smoothness.
- Improve fastness properties

25 % formulation - 2 - 4 % Dosage

50 % formulation - 1 - 2 % Dosage





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