

Your Partner for Green Textile Care



The fresher company.

Cleaning **DC Naturell®**



The alternative solvents with high cleaning power



DC Naturell®



We offer complete solutions

**...TO ALL PROFESSIONAL TEXTILE AFTER-CARE
SERVICE BUSINESSES FOCUSING ON
CLEANLINESS, HYGIENE AND DISINFECTION.**



SEITZ is an innovative, family-owned, German company with a pronounced international orientation and commitment to the development of specific solutions for specific customer groups, within all fields of professional cleaning, sanitation, disinfection and textile care.

Consultancy by SEITZ

No matter whether you are in professional textile care, maintenance cleaning and sanitation or dermatological protection, we offer you individual consultation on our products, concepts and system solutions. Our service offer is ideally suited to all those companies and service providers whose task it is to care for and maintain existing resources while at the same time protecting the environment as well as human beings from infection and disease.

All SEITZ products have important things in common:

They are economic in consumption, they are highly active and they facilitate operations. It is our constant ambition to offer products that are non-hazardous in work and handling and, as for the raw materials we are using in our products, it is of great importance to us that they are biodegradable as far as possible.

In a long and continuing tradition, the name of SEITZ has always stood for prudent progress: It has always been our ambition to develop innovative, interactive product systems as well as thoroughly researched procedures, linked always to future-focused technologies and customer-orientated services, which will help our customers to improve their own competitiveness.

Bearing in mind the all-important economic influences, we are very aware of our responsibility to succeeding generations. In all our product and service developments, we are guided by our founding principles: 'To avoid any detrimental influence to the environment and to use all resources carefully and efficiently'.

- **ADVICE**
- **PRODUCTS**
- **PROCEDURES**
- **TECHNOLOGY**
- **TRAINING**
- **SERVICE**

Innovations since 1885

In constant development for our customers



On the following pages we would like to demonstrate the benefits of DC Naturell® and introduce to you our high-quality products for this environmentally friendly, alternative way of dry cleaning.

Welcome!

The experience of more than 130 years is integrated into our daily work. In our company-owned laboratory and technical departments, we develop products, processes and equipment for national and international distribution and use. We also test them for their efficiency and performance against industry-standard, technical application criteria.

We listen when our customers describe their needs to us as well as their problems and their wishes. From these discussions our research and development and technical departments are challenged to seek innovative solutions.

Every development is under control: Our products processes and equipment technologies are subjected to continuous ongoing scrutiny and all SEITZ product specifications are subject to change if necessary, for the achievement of the customer's requirements. In this way we can continuously enhance the quality and efficiency of our solutions and services.

We purchase high-grade raw materials and other products in the mix, exclusively from selected suppliers who guarantee consistently supreme quality and the highest standards. All incoming raw materials and all outgoing products are routinely checked. It is only in this way that we can be sure to guarantee supreme quality and maximum safety in our products. This dedication to consistent quality and maximum safety is also reflected in our total quality management system according to DIN EN ISO 9001 and DIN EN 14001.

Your SEITZ-Team

The fresher company.



So simple – so ingenious: **DC Naturell®**



DC Naturell® is different!

- Different by manufacture
- Different in textile cleaning and
- Different because it is absolutely ecological

Presumably, **DC Naturell®** is the most environmentally friendly cleaning process available, at present.

As opposed to the traditional dry cleaning process, the **DC Naturell®** system does not use any conventional solvents.

The **DC Naturell®** process cleans with pure liquid silicon's which basically involve "liquefied" sand.

The same natural sand which our earth has generated over six billion years. **This means: no substances that pollute the air, contaminate the soil or poison the water.**

In disposal, **DC Naturell®** simply decomposes again into its three natural components: **water, carbon dioxide and sand.**



Rethinking in favour of ecological operation has also taken place in the business of professional textile drycleaning.

Thanks to **DC Naturell®**, there should no more obstacles in realizing these purposeful intentions. Complicated handling of ecological products and processes are a matter of the past thanks to such innovative achievements like **DC Naturell®** Cleaning.

At the same time, one can rely on the fact that sensitive, heavily strained or extremely soiled textiles can also be cleaned thoroughly in a caring and odour-neutral way.



That is so particular about **DC Naturell®** :

- **DC Naturell®** is environmentally friendly, is not classified as a hazardous substance nor as hazardous goods.
- Textiles treated with **DC Naturell®** provide comfortable wearing and will preserve the shape and colour of the textiles.
- **DC Naturell®** is odour-neutral.
- **DC Naturell®** reaches significantly better results in the finishing process. It is possible to reach up to 20 % saving by treatment in time reduction.
- **DC Naturell®** has been successfully tested in all multi-solvent machines.



DC Naturell® not only is ecological but also extremely gentle to textiles and fibres!

Scientific studies have proved that **DC Naturell®** does not only operate in a much more environmentally friendly way but also provides textiles with a much softer handle which enhances their wearing comfort on the skin. For this reason, **DC Naturell®** offers an interesting alternative to the conventional dry cleaning.

Our DC Naturell® products

Pre-brushing agent

Polysol GE



Powerful hardly irritant **pre-brushing agent**

- Pre-spotting for all kind of spots – perfect action both on wetbound and grease-bound soiling
- Suited for coloured and white textiles and does not attack the colours
- Is rinsed without problem during the drycleaning process
- Has proved its especially powerful action in case of tenacious grease and pigment soil on e.g. collars



Spotting agent

Solvex 1



Pre- and postspotting agent for removal of grease and colour stains

- Spot remover for spots of paint, lacquer, adhesives, grease, ball point pen, tar, nail polish, lipstick, ink and similar stain substances.
- Prior to spotting, we recommend to try the products on the seam!



Solvex 2



Pre- and postspotting agent for removal of blood and albuminous stains

- Spot remover for spots of blood, albumen, food remains, sauces of meat and fish, milk, ice-cream, cream, beer, chocolate, cacao, perspiration, pigment dirt, urine and similar stain substances.
- Prior to spotting, we recommend to try the products on the seam!



Solvex 3



Pre- and postspotting agent for removal of tannins and tanning agent stains

- Spot remover for spots of coffee, tea, wine, coke, fruit juice, fruit, liqueur, tobacco, grass, perfume, medicaments and similar stain substances.
- Prior to spotting, we recommend to try the products on the seam!



Dryclean detergent

EarthClean GE



Dry cleaning detergent with good water retention

- For use in silicon solvents with powerful dry cleaning action
- Good water retention and with a high soil suspension
- Earth Clean GE has been tested and approved as a pre-brushing agent and dry cleaning detergent. It is recommended for dry cleaning in D5 dry cleaning equipment.





Solutions

DC Naturell®



Solvent for dry cleaning

- The high flash-point guarantees safe use
- DC Naturell® is odour-neutral
- Can be used without problem in all dry cleaning machine types.
- Chemically stable, has anti-corrosive properties and is totally odourless



Clinosolv Adsorb



Filter and adsorption powder

- Filter powder for good pigment soil clarification in the filter system, binding solvent-soluble contamination by adsorption
- Good binding capacity for textile dyes, fatty acids, pigment soil and similar substances
- Substances likely to cause discoloration or unpleasant odours are eliminated from the solvent
- Clinosolv Adsorb has been developed for use in machines without distillation



Water repellent agent

Cetox KWI



Fluorocarbon resin based Water repellent with finishing agent

- Liquid water repellent agent with fabric protection for use in DC Naturell®
- The product renders perfect water repellent finish of sports, weather and leather garments.
- The ready to use solution combined with an effective protection against re-staining and re-soiling provides an excellent repellent effect.



See, feel and smell the differences!

- White remains white
- Colours do not fade no matter however often textiles are cleaned
- Wool does not felt
- Fibres remain soft

What's so special about DC Naturell®?



HERE YOU FIND ANSWERS TO YOUR QUESTIONS:

- **What is DC Naturell®?**
DC Naturell® is a registered brand name for a solvent. This solvent is a liquid silicon with the chemical designation Decamethylcyclopentasiloxane, in short called D5. The D5 is a solvent which has been known and used for more than 50 years.
- **Where can I buy or am I allowed to buy this solvent?**
This solvent is available from SEITZ GmbH by the name of “DC Naturell®“ bezogen werden.

PHYSICAL PROPERTIES

Odour

- **What is the odour like?**
The DC Naturell® solvent is completely odourless.
- **Will I have solvent smell in my clothes after cleaning?**
With professional solvent care, the clothes have an absolutely neutral smell.
- **Will I have unpleasant solvent odour in my shop localities?**
As opposed to other solvents, there are is no smell in your shop localities caused by this solvent.

Consistency

DC Naturell® is a colourless, clear liquid.

PHYSICAL DATA

- **What are the physical data of this solvent?**
Raw material designation: Decamethylcyclopentasiloxan
Short name: D5
Brief description: colourless and odourless liquid
Density: 0,96 g/cm³
Flash point: 77 °C
Boiling point: 210 °C
Solubility: <0,1 mg/l in water

SAFETY

- **Are there any health risks caused by DC Naturell® solvent?**
There is no detrimental knowledge gained by cosmetic industries over a long period of time.
- **What is the hazardous substance classification of DC Naturell®?**
There is no classification. D5 is no hazardous substance and no dangerous good and no flammable solvent within the sense of the “Betriebssicherheitsverordnung” (Regulation of Operation and Production Safety)
- **How safe is DC Naturell® handling?**
In normal handling and use, there is no hazard for humans or the environment.

Neither by direct nor indirect contact. Long-term experience and knowledge is available from cosmetic industries.
- **How many years of experience are there in handling this solvent?**
DC Naturell® was launched on the market for the first time in 1999.

Thus this solvent has been marketed for the longest period of time in comparison to all other modern solvents and moreover has been tested in most various ways. It has been classified as being very ecological and without any hazard to human beings.

CLEANING ACTION

- **How are the drycleaning results as compared to perchloroethylene and hydrocarbon solvents?**
In the traditional drycleaning procedure, the cleaning results are comparable to those obtained with hydrocarbon solvents. Yet, the cleaned textiles have an even softer and more pleasant handle, they crease much less and thus the finishing work is much more reduced. In the Energized DC Naturell® procedure, drycleaning results are obtained which are almost as good as those obtained in traditional cleaning in perchloroethylene.

- **What are the advantages of this solvent as compared to hydrocarbon solvents?**

With the same results as hydrocarbon solvents or better results than with HC solvents, DC Naturell® is much less problematic in application. There is no hazardous substance classification.

The flash-point is about 77 °C and thus more than 15 °C above the flash-point of hydrocarbon solvent (61 °C). The risk of bacteria formation in the drycleaning machine is considerably less with DC Naturell® than with hydrocarbon solvents. In professional care, there will be no unpleasant odours due to bacteria.

- **What are the advantages of this solvent as compared to perchloroethylene?**

Due to the very negative classification with regard to ecological quality and the very negative press through out the past years, in future, perchloroethylene will become a phase-out model in textile drycleaning. DC Naturell® is the only odourless and environmentally friendly alternative for professional textile care in future.

- **What about oleaginous work clothes?**

Here, too, this kind of soil can safely be removed by the DC Naturell® procedure.

- **What about water-soluble stains?**

According to the machine type and procedure, water-soluble stains can be removed very well by means of using drycleaning detergents and drycleaning activators and water.

ECONOMY

- **How much work and expenditure is required for ironing?**

DC Naturell® is a silicone-based solvent. Silicones are able to mantle the fibre and to protect it. In this way, they improve the quality for ironing and thereby considerably reduce the ironing work and expenditure.

- **How much are the costs for solvent cleaning and care?**

Solvent Cleaning and Care with Distillation

In cleaning and care of this solvent by means of distillation, only the cost of the used energy will occur. There will be no time consumption nor product cost due to addition and disposal of filter auxiliaries.

Greases and other substances difficult to remove by filtration will be removed reliably. Errors are reduced to a minimum. Possible colour residues from discolouring in clothes or ballpoint are removed by distillation.

Solvent Cleaning and Care without Distillation

Solvent cleaning and care will be possible with so-called filter auxiliaries. Thorough care and strict observation of the procedure will be indispensable for maintaining the solvent quality.

- **How much is the solvent consumption?**

Exact consumption values can be asked from the machinery manufacturers. Experience has shown that the average consumption is below 1% according to the type of textiles, related to the mass of the cleaned textiles (thick resp. thin goods).

COSTS

- **What is the cost of DC Naturell® solvent?**

The prices of DC Naturell® may fluctuate according to raw material availability. In general, using DC Naturell® is not more expensive than other solvents since the consumption is very low according to the machine type. DC Naturell® is less expensive than all other comparable green solvents.

APPLICATION

- **How will I get assistance from SEITZ in conversion and implementation?**

SEITZ have compiled a package for optimum use of the patented DC Naturell® procedure. This includes elaboration of the drycleaning programs, training of your personnel for use of the new products as well as ample advertising material.

PERMITS AND REGULATIONS

- **Which approvals do I need respectively which regulations will I have to observe for operation of a DC Naturell® drycleaning machine as compared to operation with hydrocarbon solvent?**

According to the Federal Department of the Environment and the supplier's safety data sheet, D5 and consequently, DC Naturell® are subject to the 31. BImSchV.

In this context, all limits for concentrations must be observed and maintained in conformity with 31. BImSchV, Annex III, Pkt. 3.1.2, .

Apart from other provisions, the following must absolutely be observed:

- Cleaning and drying of the textiles to be treated must be done in closed system according to the latest stage of technology.

- Automatic locking must secure that the load door cannot be opened until after completed drying when the D 5 mass concentration in the drum does not exceed a value of 5 g/cbm resulting from continuous measuring control.
- The mass concentration in the sucked off, undiluted exhaust from a mass flux of more than 0,2 kg/h (155l/h), as an average ,via the drying or exhaust phases must not exceed 0,15 g/cbm.
- The admissible emission limit is 20 g/kg of cleaned and dried textile goods.
- For meeting the VOC Guidelines, an annual solvent balance must be set up.
- Professional knowledge according to BGR 500 will be required.

DISPOSAL

- **How can I dispose of the distillation and filter residues?**

The waste and thus the distillation and filtration residues must be recycled or disposed of as hazardous waste by an appropriate waste disposal service.

- **How can I dispose of the contact water?**

In disposal of contact water, the limit value for discharge must not exceed 20 mg/l. If this limit value is exceeded, the discharge water must be treated for proper inlet.

MACHINERY

- **Which drycleaning machines can I use for operation with DC Naturell®?**

All equipment distributed by the machinery manufacturers as Multi-Solvent Machines can be used. The question of whether older hydrocarbon machines can be converted must be checked by the machinery manufacturer in the individual case.

- **Can I do water repellent finishing in the drycleaning machine?**

Yes, SEITZ has developed a special impregnation for DC Naturell®. Greenguard is an impregnation based on a silicone and is used to smooth, water-repellent finishing of sports, weather and leather clothing.

- **How many DC Naturell® machines are in operation?**

Worldwide there are approximately 2000 shops working with DC Naturell®, approximately 600 of which are located in the USA.

In Europe, D5 is used preponderantly in Germany, England and France.

- **Who are the manufacturers offering DC Naturell® machinery?**

D5 machines are offered in Germany by all reputed machinery manufacturers.

AUXILIARY PRODUCTS

- **Which products are needed?**

As far as the products are concerned, the same groups are required as for operation with perchloroethylene and hydrocarbon solvent.

Pre-spotting agents:	Solvex 1, 2, 3
Pre-brushing agent:	Polysol GE
Drycleaning detergent:	Earth Clean GE
Filter powder:	Clinosolv Adsorb

- **What are the tasks of the drycleaning detergent EarthClean GE?**

Apart from the properties known from drycleaning in the traditional solvents, the drycleaning detergent in DC Naturell® has the special task to bind water since the solvent itself cannot do this. Good water-binding capacity enables perfect dissolution of water-soluble soil and complete removal of such soil without the risk of redeposition and grey stains or marks.

- **What is the task of the pre-brushing agent Polysol GE?**

Polysol GE is a pre-brushing agent not likely to cause irritation which is excellently suited for removal of all kind of stains. It is active both on wet-bound and on grease-bound stains. The product has no detrimental

effects on coloured textiles and can be rinsed without problem during the drycleaning process.

- **What is the task of the drycleaning activator Polysol JET?**

Polysol Jet is used in pre-spotting for spraying on wet-bound soiling. It is not likely to cause irritation in spraying and is compatible with the skin due to being exempt from any solvents.

ENERGIZED DC NATURELL®

- **What is Energized DC Naturell®?**

Energized DC Naturell® is a procedure elaborated and tested by SEITZ which enables DC Naturell® operation at higher temperatures (up to 40 °C) with absolute safety for the textiles.

- **What is so particular about Energized DC Naturell®?**

Due to the higher temperatures, the drycleaning action is enhanced exponentially according to the Sinner Circle, in the same way as can be observed with water.

- **Will the warm solvent not become too aggressive or damage the colours?**

Long years testing has shown that this almost does not happen. The textiles treated come out of the machine in nearly new state. Of course, there is one or the other exception as is the case with all solvents but our thorough tests have shown that this happens much more seldom as compared to all other solvents.

- **Will cleaning always have to be done with warm solvent?**

The warm solvent is an option that can be switched on in addition. If extremely delicate textiles are to be cleaned, this option can simply be switched off and cleaning be done in cold solvent (e.g. leather, fur, silk etc.).

- **How is the solvent heated up?**

According to the type of machine, the solvent is heated up in different ways. Usually, heat exchangers are used for this.

- **How is the grease-solubilizing capacity?**

With the Energized DC Naturell® Procedure, we have so far reached the best grease-solubilizing power given with all ecological solvents, almost the same as that obtained with perchloroethylene.

- **Does heated up solvent reduce the energy required for drying and distillation?**

Already in the first bath, the solvent is heated up to a higher energetic level. This requires less energy for reaching the evaporation temperature. Due to the operation at higher temperatures, the entire energy level is maintained in the machine throughout the whole day, resulting in less energy required for distillation and drying.



MARKETING BENEFIT

- **May I alter the DC Naturell® Logo according to my taste (colour, script, etc)?**

The logo must be used in original form and not be tampered with. (A detailed user manual can be ordered separately from SEITZ).

In order to simplify this for you, we have elaborated some draft concepts for your choice in case you wish to present yourself as DC Naturell® Cleaning-supplier.

- **What are the marketing instruments for supporting DC Naturell® cleaners?**

SEITZ will make available to you advertising material in form of logos, flyers, hanger tags, window stickers, posters and many more which will enable you to provide your customers with information about the process.

- **Where can I get further information?**

Please contact our technical servicemen or directly SEITZ technical department on phone No. + 49 (0) 6192-9948-0 or by e-mail to info@seitz24.com.

We greatly appreciate your interest and looking forward to your call.



Competent professionalism – in theory and practice



SEITZ – Advice and service

When you make the decision to use SEITZ products, you will not only be working with a company that is supplying and selling products, you will be working with a company that provides first class technical and personal services to its customers.

Our fully trained and qualified technical staff, as well as our skilled sales staff invest their considerable professional knowledge, backed-up by their long years of experience in professional textile care; a combination which makes working with SEITZ products and procedures pleasant and trouble free.

SEITZ – Best evident application technology

We offer entire solutions for hard floor- and surface-cleaning services.



For the accurate dosing volume of our products, we supply the appropriate and correct equipment from a large assortment of dosing pumps held in stock by our suppliers. Our technical department is responsible for the design and specification of our custom-made solutions for your dosing requirements.

Please do not hesitate to contact our technical department or your local technical sales representative for further information.

SEITZ – Technical advice and training for your personnel

SEITZ offer training seminars for professional advancement and help to simplify operations, handling chemicals and for the avoidance of mistakes. In the professional advancement seminars, your staff will be trained to become very well qualified professionals and will be certified by a final qualification test.



SEITZ training seminars cover the following topics: Cleaning procedures, product input and dosage, hygiene and quality standards, fibre and fabric knowledge, care labelling, textile sorting, stain removal and complaint handling. All attendees will be kept advised of any relevant updates on all topics. New staff will be trained to a good competence level in the correct use of SEITZ products.

Please ask for our complete list of services and offers.

WE ARE AT YOUR DISPOSAL WITH WORDS AND ACTIONS!

Good to know:

We have available for you detailed information on our various products is in the form of technical leaflets and separate brochures. Our process application technicians and external technical sales staff will advise and assist you by phone or at site. In crucial cases, we will be supporting you with competent advice, textile inspection or laboratory analysis.



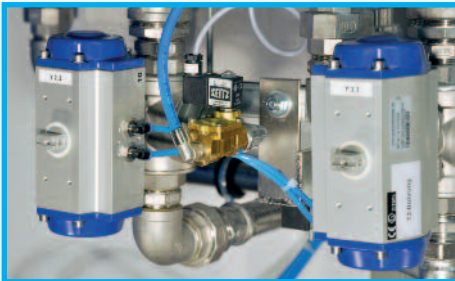
Support

Benefit from the knowledge of our team! Our competent national and international process application technicians will support you with their entire knowledge and that of colleagues, to assist you in the problem solving process, even if the issues are not connected to the use of our products or some other laundry factor such as water quality, technical innovation or the economic optimisation of your operations. Do not hesitate to contact us for an appointment.



Laboratory

We gain important knowledge with a specialist team we do this by means of a modern laboratory facility. This enables us to create new products and to develop innovative procedures for advancement; these are the main tasks of our laboratory. Professional competence and know-how, combined with solid fundamental research, enable us to continuously adapt our products to modern machinery and process technologies. We will consider even the most special product requirements from our customers and to guarantee supreme quality.



Technology

However, to develop products is only one aspect of what we do. To satisfy the economic and environmental necessities of the 21st century, Seitz is dedicated to the development of innovative technologies, working alongside our partners to achieve the best technology solutions for our customers. In our technical department, we do all necessary to alleviate work for you, to simplify handling, to optimize operations and to reduce costs. In all our activities, safety for human health and the environment are of paramount importance.



Production

The raw material storage requirements to suit the needs of a modern production plant mean an efficient, safe and environmentally friendly manufacture of high quality products. By means of a central electronic control system, the raw materials precisely added to the mixing tanks precisely and all chemical blending is supervised. There is constant monitoring of the quality of our raw materials their precise dosage and the continuous control of quality assurance is the key to our success.



International

SEITZ products are used worldwide. In Germany alone, we service more than a thousand customers. Almost 50 % of our production is exported. It is our objective to do more than merely supply products. We develop and sell concepts and entire solutions which open up many possibilities for our customers to consolidate their business activities in a very competitive market and help them to grow their businesses and to set themselves apart from their competitors.



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Innovations
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