



## Water water everywhere and a healthy drop to drink!

Activated carbon has long been used to filter drinking water in both municipal water treatment systems and point of use products. A unique US company called LiveWell has recently launched an exciting new product which uses Zorflex 100% Activated Carbon Cloth to filter water literally as the consumer is drinking it.

Thanks to Zorflex, LiveWell can claim the following benefits:

- Instantly improves the safety and taste of municipal water and bottled water by reducing several categories of contaminants and impurities found in US public water systems and the 1 billion single-serve plastic bottles sold every week in the US.
- Independent test results from Analytical Laboratories in Boise, Idaho show:
  - Up to a 50% reduction in Chlorine
  - A marked reduction of the 26 Volatile Organic Chemical contaminants

- A marked reduction of the 18 Semi-Volatile Pesticide contaminants
- A marked reduction of the 18 Semi-Volatile Herbicide contaminants
- A marked reduction of suspected cancer causing TTHM's (the disinfecting by-product of Chlorine mixed with other compounds found in US water)

The LiveWell filter is designed to meet or exceed several of the US NSF 42 standards for Chlorine, particulate and odor reduction, is 100% BPA free with a biodegradable additive. The filter contains Zorflex activated carbon which treats organic substances such as the active ingredients in many pharmaceuticals.

In addition to this unique design, LiveWell have also developed the patented, reusable LiveWell cap which attaches to the LiveWell filter containing the activated carbon cloth thus creating a system which delivers personalized nutritional supplements. Supplements available include Live Skinny™ for weight management, Live Healthy™ for immune system support and Live Energized™ to maximize energy levels. Tablets are loaded into the chamber and slowly dissolve over the course of drinking 14-16 ounces of water. Users can personalize the system by adding different combinations of the supplements to the LiveWell cap so reap the benefits of each separately or all at the same time.

**The portable product, the LiveWell filter, is a patented worldwide exclusive and is designed to attach to standard water bottles.**



For more information visit [www.livewellwater.com](http://www.livewellwater.com) or [www.livewellfilter.com](http://www.livewellfilter.com) or email [info@livewellwater.com](mailto:info@livewellwater.com)

## The possibilities are endless....

Activated carbon cloth has uses in so many industries and applications that it is impossible to list them all here. However, *some* of the applications of Zorflex activated carbon cloth include:



Air conditioning  
Cabin air filtration  
Catalyst media  
Conservation  
Domestic odour control  
Electrodes  
EMI shielding  
Emission control  
Fuel cells  
Gas sensor protectors and filters  
CBRN decontamination wipes, mitts and pads  
CBRN protective clothing, socks and gloves  
Ostomy filters  
Personal protective equipment  
Protection of artefacts  
Purification filters  
Respiratory masks



Sensor protection  
Solvent recovery  
VOC filtration  
Water filtration  
Wound dressings

To discuss whether Zorflex can be used in your application, contact us on +44 (0) 191 584 6962 or email: [info@chemvironcarbon.com](mailto:info@chemvironcarbon.com)

Get the latest updates straight into your inbox



Chemviron Carbon Cloth Division recently launched an e-news service which allows subscribers to receive the latest technical updates, details on new product launches and case histories. Please visit our website [www.chemvironcarbon.com](http://www.chemvironcarbon.com) and click on the Activated Carbon Cloth page. From there you can access the 'sign up for news updates' form which takes a few seconds to complete.

## Contact us

If you would like to find out more about Zorflex or discuss how Zorflex can be used in your particular application, please contact the relevant sales and business development team member who will be happy to help.



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# Adsorbing News

News from Chemviron Carbon's Cloth Division – manufacturers of Zorflex® Activated Carbon Cloth

## New cleanroom facility for Chemviron Carbon Cloth Division

Chemviron Carbon Cloth Division is pleased to announce the opening of a new state of the art cleanroom as part of the Company's multi million pound investment programme.



The Cloth Division's previous temporary cleanroom structure was compliant with the ISO 13485 standard and Class 7 ISO 14644 in the Zone 3 pouching area. The newly constructed cleanroom retains the ISO 13485 standard and expands the scope of the ISO 14644 standard with the addition of the lamination area complying with Class 8 ISO 14644.

The Company's overall expansion plan requires the creation of space on the factory floor to increase production capacity. The construction of the 120m<sup>2</sup> cleanroom onto a new mezzanine level allows the Company to sufficiently increase its space for production equipment on the ground floor level.

As an integral part of the Company's production capability, the cleanroom facility at Chemviron Carbon Cloth Division is primarily used for the processing of activated carbon cloth for wound dressings. Prior to the new commission, a temporary structure served as the Company's cleanroom. The Company's overall production capability for wound dressing products includes lamination of the activated carbon cloth

to other materials, slitting and cutting and final pouching of the wound dressing. Certain wound dressing customers only require one or two elements of this process and many of the Cloth Division's customers include some of the world's leading medical device companies.

A two-storey cleanroom was constructed inside the existing factory, with creative use of slimline equipment to ensure the most efficient use of space within the new facility. As a key feature within the upper level cleanroom area, a number of transfer hatches were used to reduce the movement of operators throughout the cleanrooms and help eliminate contamination at each process point in the manufacture.



Much consideration was given to the planning of the cleanroom as an integral part of the Company's expansion plan. Consultations were made with wound dressing customers, consultant microbiologists and the Company's notified body. The Cloth Division required the contractor, WH Partnership, to come up with a solution that maximised manufacturing areas, reduced carbon footprint and energy costs and streamlined the process, without disruption to existing manufacturing.

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## Zorflex isolates organophosphates in aircraft cabin and cockpit air

'Organophosphates' is a term comprising a large group of compounds including well known neurotoxins. Some organophosphates are widely used in pesticides and herbicides where long term exposure to low concentrations has been linked to disruption of the nervous system. At high enough doses acute toxicity and death can occur which is why some of these compounds are also classified as Nerve Agents and as Weapons of Mass Destruction (e.g. Sarin).

Other organophosphate compounds are known to cause delayed neurotoxic effects, such as ortho-isomers of tricresyl phosphate (TCP). The use of the organophosphates (for instance TCP) in aviation lubricating oils and hydraulic fluids and its impact on health and flight safety is currently being researched. Aero-toxic Syndrome is a medical condition allegedly caused by exposure to contaminated bleed air.

The challenge for Health and Safety professionals, where "low concentration" exposure to chemicals occurs, is to be able to isolate, immobilise and identify the chemicals concerned especially where they may be present below "detectable limits".

Over the last 4 years the National Institute of Occupational Health (NIOH), Oslo, have successfully developed and evaluated a series of both short and long-term sampling techniques to assist in the research.

Activated carbon was an obvious choice as an adsorbent, however due to the "low concentrations" of organophosphate the challenge for the researchers was to identify a high purity activated carbon to reduce "noise" or "interference" from other molecules which may be present in the activated carbon. These other molecules would affect the efficiency of detecting the organophosphates.

## A presentation not to be missed!

As part of the Company's presence at the forthcoming Medica / Compamed exhibition – billed as the World Forum for Medicine – Jack Taylor will present a paper on 'Zorflex Activated Carbon Cloth as a Platform Technology in Combination with Superabsorbents and Adhesive Dressings'.

The presentation will take place in the IVAM Forum in Compamed Hall 8a on Thursday 17th November at 11.50am.

For wound care applications, sought-after properties found in Zorflex include not just its odour adsorbing efficacy but its ability



Zorflex pure fabric placed in the cabin area to adsorb 'interfering' molecules.

### The researchers identified Zorflex cloth as the most effective material of choice for their application.

From the wide variety of activated carbon materials available the researchers identified Zorflex cloth as the most effective material of choice for their application.

As well as aiding the research, Zorflex can also be used as an effective filter medium to mitigate the effects of organophosphates and improve the quality of cabin air for both crew and passengers.

Details of the study have been recently published by the Royal Society of Chemistry in their publication 'The Journal of Environmental Monitoring 2011,

13, 1393-1403. The article – "Organophosphates in aircraft cabin and cockpit air—method development and measurements of contaminants" is written by Kasper Solbu, Hanne Line Daae, Raymond Olsen, Syvert Thorud, Dag Gunnar Ellingsen, Torsten Lindgren, Berit Bakke, Elsa Lundanes and Paal Molander, in collaboration by NIOH, University of Oslo (Norway) and Uppsala University (Sweden). This paper is also part of a PhD-thesis which is available as a digital publication at University of Oslo ([www.duo.uio.no](http://www.duo.uio.no)).

to act as an active antimicrobial, non cytotoxic, non invasive layer in order to promote accelerated wound healing. Zorflex has been used in woundcare for many years but its properties and functionality are more relevant today than ever before. This presentation will aim to give attendees an overview of the newest applications of Zorflex in a wound care setting.

If you cannot attend the presentation, please do not hesitate to contact Jack Taylor at [jtaylor@calgoncarbon-eu.com](mailto:jtaylor@calgoncarbon-eu.com) who will supply you with further information.

Medica/Compamed run on an annual basis and take place in

Dusseldorf, Germany. The event attracts exhibitors who represent the complete spectrum of new products, services and processes for use in doctors' surgeries and hospitals. Chemviron Carbon Cloth Division will be exhibiting at Medica/Compamed between 16th and 18th November 2011 in Hall 8a, stand H19.1.

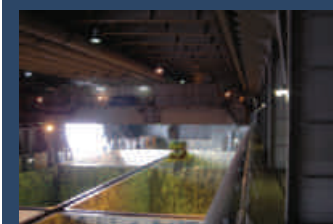
For more details on the exhibition visit [www.medica.de](http://www.medica.de) or [www.compamed.de](http://www.compamed.de)

## Zorflex makes big difference to vast vessels

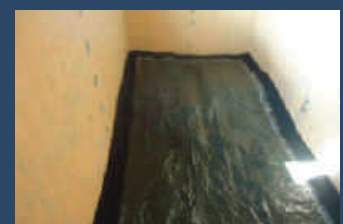
Zorflex has been successfully used by a leading shipping company to eliminate odour from its cargo.



Gearbulk has some totally enclosed forestry vessels in its fleet of ships.



The cargo compartments on such vessels are not totally sealed from each other.



Zorflex was laid over void spaces between the cargo and bulkhead to catch any escaping odour.

Gearbulk is an international shipping company providing high quality transportation services for various industrial sectors. The company operates the world's largest fleet of open hatch gantry craned vessels as well as open hatch jib craned vessels, specifically designed and equipped to transport utilised cargoes such as forest products, non-ferrous metals and steel.

As part of its fleet, Gearbulk owns 4 totally enclosed forestry vessels. The cargo compartments on such vessels, which approximately measure a huge 23m x 12m x 18m, do not have conventional hatch lids and are open to a common enclosed atmosphere. Therefore a major challenge to Gearbulk is the containment of the smell from odorous cargoes to prevent tainting of other cargoes.

Just using plastic sheets to cover the odorous cargo was not a completely satisfactory solution as not all the odour was successfully retained. To catch any odour that still might escape, Gearbulk looked for activated carbon cloth and sought the help of Chemviron Carbon Cloth Division. Zorflex was laid over void spaces in between the cargo and the bulkhead to capture any escaping odour.

Commenting on the efficacy of Zorflex, Gearbulk's Operations Department said, "We believe that Zorflex has been very useful in containing the odours and preventing cargo taint. Even after almost a month on board the vessel hardly any smell was noticed from the odorous cargo."

*"We believe that Zorflex has been very useful in containing the odours and preventing cargo taint."*

## Cloth Division celebrates staff long service awards



Just two of the many recipients of Chemviron's Long Service Awards (Bill Hicks - left, Malcolm Barron - right) presented by Bob Brown, General Manager, Cloth Division.

Chemviron Carbon Cloth Division recently launched its Staff Long Service Awards to present a thank you to staff for their years of service which in the Cloth Division's case ranged from 5 to 17 years. Staff were presented with wine, chocolates, champagne and hampers depending on their years of service.

Speaking of the awards, Bob Brown, General Manager of the Cloth Division said: 'The Long Service Awards provide a great opportunity to thank staff for all their efforts and hard work. It is very encouraging to know that we've retained staff for a number of years and we look forward to making this an annual celebration.'



## Another form of expansion!

As well as extensive plans for the Cloth Division's expansion, it seems that the expansion bug has caught on and is affecting Cloth Division staff too! Melissa Collins, our Marketing and Customer Services Manager, will be going on maternity leave in December therefore this

is the last issue of Adsorbing News for a few months. When she returns the publication will be back in full swing so in the meanwhile please email your article requests or ideas or indeed any comments on this issue to [rbrown@calgoncarbon-eu.com](mailto:rbrown@calgoncarbon-eu.com).

SCIENTIFICALLY APPROVED BY GEEKS



## Zorflex – the active ingredient in flatulence underwear

Activated carbon cloth was first developed in the 1970's for use in military clothing and masks to protect wearers against nuclear, biological and chemical agents. Spring forward to today and it has numerous additional uses in various applications such as wound dressings, sensor protection, ostomy filters and the list keeps growing.

It is Zorflex's use in chemical warfare suits which gave UK company Devol the idea to develop underwear specifically for those who suffer from excessive or malodorous flatulence. Jokes aside this condition can affect everybody and cause intense embarrassment and anxiety for sufferers of IBS, Functional Dyspepsia, Food Intolerances, Crohn's Disease, Colitis, Inflammatory Bowel Disease, Digestive Disorders and Peptic Ulcers.

Many sufferers find themselves unable to take part in activities most people take for granted, be it going out for dinner, getting on an aeroplane or even simply socialising with others. Many find that the symptoms of their condition can hold them back at work, rendering them unable to meet their full potential.

Back in early 2008, Devol seized the opportunity help such sufferers and developed a patented underwear product called Shreddies. Shreddies is designed to give sufferers freedom, reassurance and confidence to live their lives. Forget unattractive, uncomfortable underwear, Shreddies looks like designer underwear you could purchase off the high street. Proof of this came only a few months after its launch as the Shreddies product won the Association for Continence Advice 'Look Good Feel Good' award in 2009.

Zorflex Activated Carbon Cloth is discreetly sewn into the back panel of the underwear. Due to the highly microporous nature of Zorflex, the odour is captured and contained within the cloth. Research by the textile testing department at the UK's De Montfort University found Zorflex to be 100% effective at removing flatulence odours – in fact it was found to filter odours 200 times the strength of the average flatus emission.

*"The launch of our new gift boxes has had a noticeable effect on sales and over the last couple of months we have reached our best sales figures ever."*

Devol has launched a quirky advertising campaign and, more recently Shreddies gift boxes which play on the more humorous side of the problem, yet retain a degree of sensitivity. Because of this the company has gained unparalleled media coverage, particularly in the UK including numerous consumer magazines, local and national radio and even a slot on the UK's popular ITV morning show Daybreak.

Commenting on the product, Ianthe Betts-Clarke of Shreddies said, "The launch of our new gift boxes has had a noticeable effect on sales and over the last couple of months we have reached our best sales figures ever. The active ingredient in our product, Zorflex, has no doubt assisted in Shreddies' success however our approach to this embarrassing condition, involving a fine balance of sensitivity and fun, has also been a major contributing factor."

For more information on Shreddies visit [www.myshreddies.com](http://www.myshreddies.com)



Stop blaming it on the dog!