

Cool Flash

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Editorial

These are busy times for Zitrec! First quarter of 2006 has been a busy exhibition period (Italy, France, Scandinavia, the Netherlands ...), of which you'll read a short report in this newsletter. Zitrec and Freezium have been standing in the spotlights, and the exhibitions had quite a large success. Does this mean that the HVACR industry is flourishing? It certainly seems so.

In this Coolflash, you'll also find a first overview on REACH. We hope that this will shed some light where possibly there is still some darkness...

Enjoy the reading!

Els Quintyn

REACH

By Els Quintyn

Some of you have already heard about it. If not, you will definitely hear about it in the coming months, because REACH is impacting the complete chemical industry. So a little bit of background...

REACH stands for *Registration, Evaluation and Authorization of Chemicals*. It's a new European legislation, expected to be adopted in April 2007. And despite that no agreement is reached on the final text yet, its impact is so drastic, that we already need to start preparing for it now.

Why REACH?

Today, new substances need to comply to an extensive range of regulations and go through stringent testing before they can be put on the market. However, many chemicals on the European market today have not sufficiently been studied on risk and safety assessment, as they were in the past subject to less detailed requirements. With the implementation of REACH, companies will need to map the properties, use and exposure of their chemical products, set their own range of safety measurements, and recommend them also to their customers. In this way, REACH wants to stimulate industry to develop and promote safer and more sustainable products.

What's the impact of REACH?

REACH has an impact on everybody in the EU handling chemicals substances or preparations, whether producer, importer, exporter, distributor, contractor, filler...

The different steps of REACH

I. Registration : This registration involves gathering information and data on physico-chemical, toxicity and environmental properties of the substance itself, as well as the final use and exposure, based on input from the end-users. All of these data will be the basis for the risk assessment, and management. So the role of the downstream user is also important. This first step is an important step, because the REACH registration will become essential to make or import chemicals in the EU!

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From Arteco to Zitrec

Gelling by silicates. Not a rare problem. Silicates are corrosion inhibitors commonly used in heat transfer fluids. Although protecting the metal against corrosion, its disadvantages are not to be neglected. Silicates form a uniform layer on the metal, decreasing as such the heat transfer. Further, not well balanced formulations, with poor stabilisation of silicate, often result in gel formulation clogging or blocking as such the pipelines, filters, pumps... How to prevent this? Use silicate-free heat transfer fluids, such as our Zitrec's and Freezium.



(REACH cont'd)

II. Evaluation : On the basis of the registration data, an evaluation will be carried out to establish whether further tests are required, or whether chemicals should be subject to the authorization process. The European Chemical Agency (ECA, Helsinki) will be responsible for the processing and completeness and compliance check of the registrations.

III. Authorization : For certain categories, a complete ban will be maintained, such as for substances classified as carcinogenic, mutagenic or reprotoxic. Under stringent conditions, the use of these chemicals can still be allowed, provided an authorization is given.

How to prepare for REACH?

1/ Prepare your REACH inventory of individual chemical substances or preparation which you purchase or manufacture. Include in this list preferably CAS and-or EINECS numbers and denominations, and yearly volumes (for 2004, 2005 and 2006). For some compounds, this first step can already become a challenge, because supplier might want to protect this as confidential business information.

2/ Identify for which chemicals you are user, and which are your sources. In the case you are importing from a non-EU based manufacturer, you might have to take on the obligation to become a registrant (if volume > 1T/year)

3/ Check if any chemicals on your inventory are outside the scope of REACH. This can be for certain polymers, chemicals on Annex II or III, or chemicals of which the volume is less than 1T/year.

4/ Check if any chemicals on your inventory are likely to be subject to the authorization procedure.

With the fact that REACH is still under development, suppliers cannot make firm commitment until final adoption. We will try to keep you informed on progress of the REACH regulation via this newsletter, or other communication channels.

Fragol : new distributor in Germany & Austria

By Tom Lansbergen

The company Fragol in Germany has recently signed the letter of intent to start distribution of our HTF products in Germany and Austria. Fragol is considered to be a very competent partner, having lots of experience in selling heat transfer fluids. Fragol has built up a good reputation over the years that they have been active selling a large range of heat transfer fluids based on oils. Their main focus area is process industry (chemical, food & beverage, pharmaceutical,...) and are well introduced to several important OEMs. They are enthusiastic about the potential of our products and we look forward to the cooperation. www.fragol.de



Readers corner

Do you have comments or feedback? Want to share experiences with other readers ... this is where you can do this. This is your corner! A selection of comments will be published here.

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With great sadness we inform our readers that Mr. Bruno Rusch from Strub Schmiertechnik passed away Jan 26. Over the years, Bruno had become to many of us a good personal friend. Bruno was 59 years old.



New Business for Brenntag Norway

Brenntag Norway has gained an interesting contract with Brd. Dahl, a major supplier to the plumbers and Industries in the Nordic area.

Zitrec MC and LC are available in Brd.Dahls distributioncenters cross country, supported by promotional material.

www.dahlinternational.com





Biodegradable!!! By Jurgen De Kimpe

“Biodegradable!!!” says the pack of wash powder in fancy green letters I bought last week-end. Hmm.... so do most of the other brands I found next to it. I don’t want to be too sceptical about the well meant efforts to inform us, but for a layman it is not often easy to interpret what is actually meant with it, nor how it is determined or on which principles claims are based



It turns out that *biodegradable* can actually mean different things. It is *‘the degradation of an organic substance or mixture of such substances whereby the action of a living organism is involved’*.

However, this degradation does not always have what one would call desirable effects. Some definitions say it is *‘the extent to which the component breaks down to its first metabolite’*. The definition supported by EU regulation is *‘the extent to which degradation to carbon dioxide (CO₂), water and minerals takes place’*.

An example : some producers of DDT, a notorious pesticide, have claimed in the past that it was biodegradable, and they’re absolutely right according to the first definition : DDT does biodegrade rather fast. The tricky part was that the metabolite formed out of DDT is the chemical component, which is found accumulated in our last birds of prey up until this day. And despite all the conservation efforts during several decades that have past since the substance was banned, these birds are on the edge of extinction. In scientific terms this is called *“primary”* versus *“ultimate”* biodegradation.

Another distinction that is often made is that between *“intrinsically”* and *“readily”* biodegradable.

Intrinsically indicates that under normal decomposition rates, there is still a big risk for (bio)accumulation and adverse effects, although the biodegradation can become 100%. Many synthetic polymers for example can be called *“intrinsically biodegradable”*.

A statement of *“readily biodegradable”* is however much more committing. In the EU this term is even written down in directives (67/548/EEC and 92/69/EEC). In the EU, *“readily biodegradable”* means :

- >70% or > 60% ultimate biodegradation in at least one of the relevant tests in less than 28 days or
- a BOD₅/COD ratio ≥ 0.5 or
- other convincing evidence that the substance is ultimately biotically or abiotically degraded for more than 70% within 28 days.

BOD₅ = Biological Oxygen Demand after 5 days incubation. It is the amount of oxygen micro organism have used to partially oxidize the carbon in the product under evaluation.

COD = Chemical Oxygen Demand. It is the amount of oxygen needed, often delivered by a strong chemical oxidant (e.g. potassium permanganate), to fully convert all carbon in the sample to CO₂.

Current EU regulations allows for a statement in the sense of *“expected to be readily biodegradable”* on for example Material Safety Data Sheets (MSDS—section 12). Although strictly spoken this is an arbitrary statement, in good practice an expert risk assessment is made on the basis of the properties of the individual components in a mixture and their relative abundance.

Some so-called risk (R-) phrases on MSDS’s and safety labels are indications that biodegradability is maybe not so-good, especially if the ecological section of the MSDS does not commit to anything. The R-phrases advisable to look out for when trying to form one-selves an educated opinion are for example the phrases: R53 (May cause long-term adverse effects in the aquatic environment) and the combination of this R phrase with R50, R51 or R52 (Harmful to very toxic for aquatic organisms).

Pump seal problems

By Tom Lansbergen

Some of today's heat transfer fluids contain an inhibitor pack that contains silicates.

Silicates often show limited stability in commonly used heat transfer fluids. As a consequence, they may form abrasive particles between the sliding surfaces of a pump seal. In many cases the silicate itself complexes with some initial corrosion product.

The abrasive damage to the seal can lead to an increase in leak rates, but may also cause the sliding surfaces to run no longer parallel, damaging surrounding parts through overheating and increase torque. Vibration of the pump axis cause the pump to operate away from its point of highest efficiency for which it has been selected, increasing the wear through corrosion, erosion and cavitation in the pump house and increases its overall power consumption.

Because a cooling or heating system is mostly pressurised over atmospheric pressure and pumps generate additional outlet pressure, the amount of liquid that is pressed out through the slit between the seals may become bigger and bigger over time. The residues of the escaping liquid may corrode the bearings, often through combined mechanical effects (fretting corrosion), or may leak excessively on less corrosion resistant surfaces. Finally, the electromotor of the pump can be reached, which may cause electric short-circuit.

Remedy: do not use a silicated heat transfer fluid, and talk to your pump supplier on the right choice of the seal. If you use any of the Zitrec products, you may rest assured that no silicate is present!

Danske Koledag

Dankse Koledag took place, from March 16-17. Also here Zitrec was presented : Brenntag Nordic promoted succesfully our heat transfer fluids.

(www.dansk-koledag.dk)



Gasco present on VSK 2006

With 60.795 visitors, VSK2006 can be considered a successfull exhibition. VSK was held from Jan 30 till Feb 5 in Utrecht. Gasco was present and promoted a.o. our heat transfer fluids Zitrec and Freezium. VSK awards went to Carrier NI, for the category Climate control and Alfa Laval, in the category Refrigeration. Selection criteria were innovation, quality, durability, and price/quality ratio.



Agenda

- 25 Apr - 27 Apr '06. Klimaatvak Gorinchem - Netherlands
Come and visit the Gasco stand!
- 20 May—24 May '06. 5th Internat. Conf. on Cold, Climate, Heating, Ventilation and Air-conditioning
Moscow - Russia
- 18 Oct—20 Oct '06. IKK Nürnberg - Germany
Come and visit the Arteco stand!

Arteco present on the largest HVAC show in Europe: Mostra Covegno

By Tom Lansbergen

With each edition of Mostra Covegno, it becomes clearer that this international event is bigger than any other show in Europe and has an even more international character than IKK in Germany. In surface area, number of exhibitors and visitors, it outnumbers any of the events that took place in the past.

With a staggering number of 170.000 visitors from all around the world, of which 30.000 came from outside Italy, the Mostra Covegno has grown over 15% since the 2004 edition. In comparison with IKK2004 where 27000 visitors were counted there is a magnitude of difference in size.

Together with Pietro Carini, our distributor for Italy, Arteco was present with a joint stand. The theme was "Long Life Inhibitors" - which is one of major values that we offer with our Zitrec products. Judging from the feedback of customers during the show, we may say that it was a very successful show for Carini and for Arteco.

Congratulations to Enrico, Matteo, Alice, Anna, and Massimo and all of the Carini team for the great effort in achieving this success!



Interclima (France) : a real succes for Dehon Service

By Sophie Choiselat, Dehon Service

Created through the combination of Interclima and the home&building section of Elec, and organized in conjunction with Idéo Bain, the bathroom show, *Interclima+Elec home&building* brings together all the trades involved in smart building technologies. Interclima + Elec is held in France every 2 years.

On this 2006 edition, in Paris from 17-20 Jan, about 20% more visitors compared with 2004 were counted : in total 102.620 persons! This progression confirms the relevance of this unique event, that gathers the players in HVAC, electricity and sanitary. Focused on refrigeration, air conditioning and linked techniques, this event offered the occasion to report state of affairs and progress to a sector which is subject to many constraints.

The exhibition was divided in 2 parts: refrigeration/air conditioning and heating/electricity. For the first time, dehon was present at 2 stands. On the refrigeration stand, dehon presented his new generation of packaging (Frioplus et Cubikool), the new primary fluid Forane FX100, the new professional cleaning range, and off course the new range of heat transfer fluids Zitrec.

On the heating stand, the launch of a new range of brazing, supported by a brazing demonstration during the 4 days, has been a real success.

Dehon service also announces the birth of Climalife™, which federates the activities of the dehon group in Europe for refrigeration, climatisation and heating. More info on www.climalife.dehon.com.





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