NEXAM CHEMICAL

Newsletter

March 2017

Nexam Chemical at JEC World in Paris

During a few days in mid-March every year is a great opportunity to interact with a large part of the industries that are important to Nexam Chemical. The JEC-fair trade in Paris brings together the world´s leading companies in composite materials. The Nexam Chemical representatives could easily navigate between manufacturers of engineering foams and various companies within high temperature composites. At this year's fair the focus was on end-users based on four major areas – aerospace, construction & building, automotive & land transportation and better living (energy, sustainability, sport/leisure etc.

Fair trades like this will enable us to, in a personal and effective way, establish contacts and build relationships with new potential partners. Customers that normally is hard to get access to being a small company in the industry. A big advantage is that you get a very clear picture of the customers focus; what is the next generation of products, which properties are they looking for and how can our technology and solutions create value down the value chain.

Fair trades are good way to maintain and establish new contacts, but also to make business. One of Nexam Chemicals strategic partners succeeded in making important business concerning PET-foam during the fair trade. A PET-foam containing Nexam Chemical technology.

There are two important things that we bring with us from the fair, which is very positive for Nexam Chemicals development:

- PET-foam is an area that will grow and that will take market share from competing technologies. One area that is discussed more and more are engineering foam for the automotive industry. How to find solutions with foam materials to build lighter automotive components.
- The airline industry has been talking about reducing weight with the help of composites for a long time. This has also happened. Now they are becoming increasingly interested in finding composite solutions also in the hotter zones in the engines. This is an area in which Nexam Chemical has relevant technology.

We are already looking forward to next year's event, but first we need to process the long project list we brought home.

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Polyethylene Terephthalate (PET)

A commonly used plastic are polyethylene terephthalate or more used, PET. This is a type of polyester frequently used in packages.

Most people associate it with PET-bottles. The Material can also be used within other areas such as fiber, which then becomes cloths. PET can also be used as construction material, both with and without glass fiber reinforcement. For textile applications the term polyester is most common while PET is more common when it comes to packaging. In terms of volume, polyethylene terephthalate is the fourth largest polymer that is produced (~18 %), polyethylene (PE), polypropylene (PP) and polyvinyl chloride (PVC) being the three largest. The majority of world production of polyethylene terephthalate is for synthetic fibers (~ 60%) and PET bottles (~ 30%).

Recycling is an interesting area for PET. Recycling plastic is often difficult since different plastics sshould not be mixed with each other. It is therefore of great importance to have as clean streams of recycling as possible in order to obtain good quality in the recycled materials. The recycling stream throughout plastics with the best purity is PET, since there is a very large number of recycled PET-bottles kept completely separated. When PET are recycled the molecular chains are broken and the plastics lose a lot of its properties. With Nexam Chemicals products and technology the chains can be repaired which even further enhance the properties of the plastic and can as a result be used in even more applications.

One application area where Nexam Chemical has had commercial success is PET-foam manufacturing. PET-foam is a relatively new material in the field of core material. Historically foam from PVC, but also balsa wood, has been used as core material. These materials are used as light spacer material between layers of non-foamed materials. This is a technique to build rigid, yet lightweight constructions. This type of design can be found in the most diverse sectors; wind turbine blades, in airplane constructions, building constructions and within the automotive sector. This is often referred to as the sandwich constructions.

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The REACh-regulation and the European Chemicals Agency (ECHA)

REACh (Registration Evaluation, Authorization and restriction of Chemicals) is a regulation that was approved by the European Parliament in December 2006 and that came in force in June 2007. REACh is the registration, evaluation, authorization and restriction of chemical substances. The aim is to improve the protection of human health and environment from the risks that can be caused by chemicals.

In principle, REACh applies to all chemical substances, i.e. not only those used in industrial processes but also in consumer goods, for example in cleaning products, paint as well as in articles such as cloths, furniture and electrical appliances. Therefore, the regulation has an impact on most companies in EU. REACh establishes procedures for collecting and assessing information on the properties and hazards of substances.

Basic principles

The basic principle of REACh is that all manufacturers or importers of chemical substances in quantities above one tonne per year are required to register the substance with ECHA. Quantities below one tonne are not necessary to register. In practical, the registration consists of a set of collected data, such as melting point, boiling point, toxicity, harmfulness to the environment, evaluation of the data, classification of the substance and finally compiling a file submitted to ECHA. In some cases the information is known and could be compiled from available sources. In other cases, such as for new products, extensive laboratory testing are required by accredited laboratories. The larger the volume of substance produced or imported, the more extensive information need to be included in the registration. The information shall, besides describing the intrinsic properties of the substance, include technical documentation and also chemical safety reports in cases where the threshold of ten tonne are exceeded. Substances that are not registered may not be placed on the EU market.

Any company that manufactures, import, distributes or uses a substance as such or in a mixture or in an article are affected by the REACh-regulations. To meet the requirements of the regulation, companies must identify and manage risks linked to the substance that they manufacture or import and sell within EU and the EES-countries. The companies need to demonstrate that the substance can be used in a safe manner and that they will provide information on appropriate risk management to the users. Registration of chemical substances needs to be done before they can be released to market.

Transitional rules

Up until May 31, 2018, certain transitional rules are applicable to a few exceptional cases. For some selected chemical substances it is possible to register for a so-called late pre-registration. This means that it is allowed to manufacture or import a substance in up to 100 tonne per year without REACh-registration. Late pre-registration needs to be done within 6 months after the threshold volume of one tonne is exceeded. Late pre-registration is possible up until May 31, 2017. The transitional rules expires on May 31, 2018, and a complete registration need to take place before that.

Data sharing

The requirement to share information about the substances manufactured, imported, placed on the market and used in the EU is a fundamental aspect of REACH. By doing this, registrants of the same substance can share information and data and thereby reduce registration costs and avoid unnecessary testing.

REACh-permission for particularly hazardous substances

In order to use or release particularly dangerous substances on the market, a permission from ECHA is required. This applies regardless what volume that the company handle of these substances. Nexam Chemical has no chemicals that fall into this category.

How will REACh affect Nexam Chemical?

Nexam Chemical is currently in a phase of commercialization with volume growth and it is expected that the threshold volumes set by REACh will be exceeded by several of the company's products and raw materials. Nexam Chemical has established a plan, on how registration and the collection of information and data required for registration, will be carried out. For some of the substances data sharing is possible, but in most cases the substances that the company produces are so unique that Nexam Chemical will be the only registrant. So far, Nexam Chemical has filed late pre-registration of approx. ten substances.

Source: www.echa.europa.eu, www.kemi.se, Nexam Chemical

Annual General Meeting May 16, 2017

The Annual General Meeting (AGM) of Nexam Chemical will be held on Tuesday, 16 May 2017, at 3:00 pm, at Elite Hotel Ideon, Scheelevägen 27 in Lund. Admission for registration from 2.00 p.m. when also coffee with accessories will be served.