



Supplying customers with technologically advanced chemical innovations of the highest quality with over 60 years of experience.

Commitment and ground-breaking expertise – driving forces at Synthos S.A. and Forchem

First business contact between Forchem and Synthos S.A. commenced at the start of this year. During these talks, all critical management system topics from economical issues to corporate responsibility and the environment were under discussion. In the end, a meaningful commercial co-operation beneficial to both parties was formed, and has been going on since June of 2009.

Synthos S.A. is a major player in European markets in the field of raw materials, semi-finished and finished chemical products. Its core products are synthetic rubber, polystyrene products and dispersions. The company has seen some rapid expansion in recent years, which has aided in turning it into an enterprise that does not only supply its customers with advanced, high-quality products, but is at the same time a safe place to work for as well as environmentally friendly. Much of the same values are also in high regard at Forchem.

Reliability creates trust

Co-operation between Synthos S.A. and Forchem started in June 2009. Forchem supplies Synthos S.A. with tall oil rosin For85, which is refined by Forchem from crude tall oil coming from the pulp industry. Synthos S.A. utilizes For85 in the production of tall oil rosin based soap which is used in SBR production. The production and sales of synthetic rubbers and latexes is one of the main areas of Synthos S.A. operations. These synthetic rub-

bers are used in the production of automobile tyres, conveyor belts, rubber hoses and flooring. In fact, Synthos S.A. is one of Europe's largest producers of E-SBR emulsion rubber. "Our decision to start co-operation with Forchem was done taking into consideration the quality of their product as well as the company's credibility," clarifies Synthos S.A.'s Raw and Packing Materials Purchasing Manager Mr. Grzegorz Kapturkiewicz. People at Forchem are also pleased with how things have gone. "We are delighted to have Synthos S.A. as our partner, and looking forward to continue this rewarding partnership," comments Olli Mähönen, the European Sales Manager at Forchem.

Green is the new black

Commitment to sustainable development in business requires foresight and planning. Commitment to reduce environmental impact is not just rhetoric at Synthos S.A. as measures have been put in place to make sure the company lives up to its promise. One of the pro-ecological initiatives the company

has taken is the implementation of its Environmental Safety Management System to meet the requirements of the EN ISO 14001:2004 standard.

On a more practical level commitment to the environment can be seen in a number of ways. For example, all the qualitative and quantitative effects have been identified, the ratios of utilities, material, raw material and energy use are being optimised. Also the maintenance and investment economy is conducted in such a way as to ensure that negative effects of the manufacturing processes are minimized. Ambitions at Synthos S.A. reach even higher than the current measures described above. "In co-operation with research and design institutions, we are seeking the best and at the same time, most economical ways of limiting unwanted effects from our operations," promises Raw and Packing Materials Purchasing Manager Mr. Grzegorz Kapturkiewicz.

As attitudes, global politics and future tax solutions continue to change in favour of a greener tomorrow, issues of corporate responsibility will weigh increasingly more at the negotiation table. Businesses such as Synthos S.A. and Forchem, who have had the foresight to make responsible decisions both economically and environmentally will be one step ahead. Both companies have shown that continuous improvement of product quality and satisfying the ever-growing customer demands go hand in hand with commitment to corporate responsibility.

Ongoing development – Forchem’s key to success

Forchem’s team was reinforced in autumn 2008 when Quality Manager Mikko Rintola, Master of Sciences, joined it to address new challenges. With a career as a laboratory manager and production chemist in the food industry, Mr. Rintola is responsible for the quality of Forchem’s raw-materials, production process, and end products and for related technical customer support. With sound experience in the chemical industry Mr. Rintola also attends research and development tasks at Forchem as an expert in organic chemistry.



“Forchem wants to continuously develop both as a company and as a player reforming the sector. Technology is developing by leaps and bounds, and we always aim to ensure that we have access to the latest know-how, or BAT - Best Available Technology,” Mr. Rintola says.

Constantly monitoring and utilising the Best Available Technology stock, looking for new trends, networking and combining new innovations in problem solving are the cornerstones of Mr. Rintola’s work and also the foundation for research and development work.

Forchem also wants to secure its place in the forefront of development. This calls for being constantly ready to look into new things, to reform and also to challenge research activities within the company. In his work, Mr. Rintola relies on development capabilities and multidisciplinary knowledge. He wants

to introduce new ways of assessing the company’s operation and to promote an open, innovative atmosphere even further through his own person. His strength in the company is also based on his broad chemical expertise, which together with the knowledge of other experienced colleagues, will open doors for new innovations in the tall oil refining process.

Endless opportunities of tall oil

Forchem currently invests in its refining process and product development. It is still the most modern tall oil distillery in the world. However, it does not yet have enough volume for conquering the world in the tall oil market, but on the European scale it is well positioned with regard to raw-materials and other manufacturers.

“There is a lot of potential in tall oil and an enormous number

of natural molecules which could be refined into a variety of fine chemicals and thereby receive more ready-to-use tall oil derived product. We currently produce a lot of basic raw materials for other industries. However, our greatest challenge and opportunity lies in increasing the degree of processing,” Mr. Rintola says.

Mr. Rintola is particularly interested in the opportunities for using tall oil in new areas in the future. Forchem is engaged in a variety of development schemes that may contain feasible projects to be cultivated into an end product delivered to the customer. As tall oil is a fully ecological product generated as a paper industry by-product, its future prospects are also challenged by the pressure imposed by the structural change in the forest industry. Mr. Rintola perceives the challenges of the tall oil industry mainly as a window to Forchem’s internal development

Harri Koskinen
Photo: Timo Juntila



Designer Harri Koskinen (b. 1970) studied in Lahti Institute of Design and the University of Art and Design Helsinki. Koskinen is one of the best-known Finnish designers in the world these days.

Koskinen’s uncompromising and outstanding design has been internationally recognized right from the beginning of his career. He has won several awards, and his works have been presented in numerous exhibitions all over the world.

www.harrikoskinen.com

Green design from tall oil rosin

Habitare – Finnish Furniture, Interior Decoration and Design Fair surprised everyone with its EcoDesign special exhibition, the first of its kind in the Nordic Countries. In the exhibition, top designers displayed their ideas about an ecological chair. There, ecologicalness denoted actions that take a comprehensive account of the environment and seek to minimise the consumption of energy and natural resources and the amount of waste and emissions resulting from it.

Harri Koskinen, an internationally renowned designer, was also invited to attend the special exhibition with his STOOL prototype. The chair is made of Forchem Oy’s tall oil rosin.

The ecological nature of the STOOL stems from the exceptional use of rosin, which is of natural origin, as the material of durable goods. The STOOL was cast in pure rosin without

adding anything else to the end product. The chair is light and in harmony with its environment, combining the aesthetic and ergonomic requirements of design.

Forchem Oy was an excellent choice for such co-operation, as its operation is entirely based on the values of sustainable development.

“Quality is everybody’s concern at Forchem, and together we can make it!”

Mikko Rintola

Master of Sciences and chemist who decided to specialise in organic chemistry, due its exactness.

Motto: “Even if you take your work seriously, you can still laugh or at least smile!”



A good cash flow turns into concrete customer service

It was the international financial crisis that finally made companies pay more attention to the sufficiency of their financial position. A sufficient cash flow contributes essentially to the ability of the company to grow and operate. Every company seeks to minimise the commitment of working capital to stores, accounts receivable, and purchase accounts. Another aim with optimising operation models is to find consistent product and operation models in order to develop organisational efficiency.

Forchem’s cash flow management is excellent. According to Hannu Näsi, Forchem’s Director of Finance, long-term customer relations and the fluent exchange of information are the most important things behind success. “During the years we have managed to build lasting, long-term customer-supplier relations on which we can base our operation control and planning,” says Mr. Näsi. “In-depth knowledge of the other party’s policies benefits both parties, ensuring good forecasting and contributing to an effective, service-oriented cooperation model,” he adds.

Predictability is the key to everything

Warehouse management plays an important role in the tall oil industry as well as in many other sectors. According to Mr. Näsi, a key element in planning is the fluent exchange of information with suppliers and customers and information on how cycling and responsibilities should be divided during the cooperation. “The cornerstone of our planning is a flexible,

highly automated production organisation that is capable of addressing the customer’s wishes even if they change fast. We also consider it important to ensure the flexibility of our warehousing, which makes us an even more effective partner,” says Mr. Näsi.

Financial stability offers Forchem the possibility to offer customised service models that support the customers’ operation. Even though it may sometimes feel that the com-

pany lies far away from Central Europe, it has been shown in practise that with optimised operation models, high availability and customer satisfaction can be achieved in all parts of Europe.

The future of European economic thinking looks good. The coherence of payment transactions has led to positive development in Forchem’s main market area in Europe, not least as a result of the introduction of the single euro payments area. Hannu Näsi would also like to see harmonisation of the terms of commerce between Northern and Southern Europe.

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Forchem at forefront of low carbon solutions



The limited availability of non-renewable resources and growing production volumes have turned the sufficiency of natural resources and the state of the environment into a globally important question. The sustainable use of natural resources, reducing the input of the non-renewable materials, and minimising harmful environmental effects are issues that one wants to take into consideration at all stages of the production chain.

The chemical industry signed an energy efficiency agreement, a system introduced by the Finnish government, at the end of 2007. According to the strategy of the energy efficiency system, all of the companies and corporations that have signed the agreement should cut down their energy consumption by a total of nine percent by the year 2016.

Forchem already signed the agreement in spring 2008. At the same time, it committed itself to achieving international goals for reducing greenhouse gas emissions and fighting global warming.

Already at an excellent level

All parts of Forchem's modern production plant, which was completed in 2002, were analysed in an energy analysis in which initial values were determined, including the distillery and office. According to a summary of the analysis, Forchem's energy efficiency is already very good. To reach the set goals, Forchem should improve its efficiency by only about two percentage points.

"We are now focusing on developing our policies further and improving the energy efficiency of the production. We have been able to improve our energy efficiency through technology investments," says Production Manager Timo Saarenko. "We already made our energy investment in the future in 2002 when the plant was completed," Mr. Saarenko adds.

The chemical industry consumes a vast amount of energy. The older technology that is still in widespread use has made energy consumption one of the largest cost items in the sector. This means that in the long term the question of energy-saving measures is not just about the environment but is also largely about company finance.

Benefits of production are also shown in carbon emissions

Forchem's energy friendly production plant is 99% fuelled with bioenergy. The utilisation of the plant's own distillates and the renewable bioenergy generated in the manufacturing process of the adjacent Metsä-Botnia's pulp mill is well in line with national and international environmental goals. Forchem is a good example of an ecologically sustainable raw-material producer.

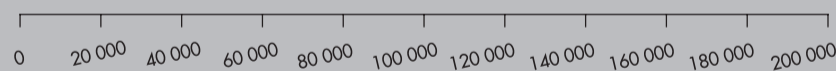
Effective production is also shown in carbon emissions. A good example is Forchem's Fortop600 liquid biofuel, which substitutes heavy fuel oil (HFO) in customer applications. The annual emission reductions achieved by substituting HFO with Fortop600 are over 125-fold compared with the emissions of producing Fortop600 from crude tall oil. Major environmental benefits can thus be obtained by increasing the use of Fortop600 bio oil. The small carbon footprint of Forchem and its products is also considered to bring major added value to the operating processes of its customers.

Climate benefits from Fortop600 biofuel

1 547* tnCO₂/a
Forchem Fortop600
production emissions

194 287 tnCO₂/a
Emission savings due to HFO substitution by Fortop600

195 834** tnCO₂/a
Heavy Fuel Oil (HFO)
combustion emissions



* 2008 emissions. Includes scope 1 and 2 of GHG protocol, scope 3 activities are excluded except for raw material logistics and business travel. Combustion of liquid biofuels not taken into account in GHG emission reporting.

** Emission factor for combustion of HFO 238,7 g/kWh (Statistics Finland). In proportion to the production volumes of Fortop600 for 2008.