

---

**SURFACTANTS & DETERGENTS NEWS**


---

product performance under this limitation, the source of chlorine has changed from chlorinated trisodium phosphate (which contains a phosphate different, and less effective, than STPP) to chlorinated isocyanurates which contain no phosphorus at all. For a given Cl level, therefore, they permit a higher level of the desirable STPP.

The I&I area, which represents 40% of the U.S. detergent industry, is highly complex. Cost and performance are important here, as are ease of use and product safety. These demands have led to changes in products and changes in builders. Builders include those used in laundry detergents, as well as nitrilotriacetic acid (NTA), a strong calcium sequestrant, and sodium hydroxide, an aggressive alkali that is too aggressive for home use.

#### Liquid versus powdered detergents

Speaking on liquids versus powdered detergents, Paul Sosis of Witco Corp.'s Organics Division concluded that multifunctional powders containing antistats, activated bleaches, enzymes, odor removers and softeners offer better overall performance than liquids and are expected to retain their share of the market.

Liquid detergents are firmly established in the U.S., Europe and Japan. Their advantages of convenience, low temperature solubility, direct application for stain removal and packaging will continue to expand the popularity of this category in other parts of the world.

Also, he predicted, specialty "niche" products designed for specific cleaning jobs are expected to grow.

He noted that higher density concentrated powders containing alkali stable enzymes are widely accepted in Japan and may be expected to show up in other parts of the world.

#### Safety and environmental issues

One of the major environmental issues faced by the detergent industry in the 1960s was foaming in rivers and streams, Keith A. Booman of The Soap and

Detergent Association (SDA) pointed out. This problem prompted the industry to seek more biodegradable products by converting from a branched-chain alkylbenzene sulfonate (ABS), the industry's workhorse anionic surfactant, to linear alkylate sulfonate (LAS). Since that time, there has been a growth of other readily biodegradable surfactants.

During the 1970s, concerns developed over the possible role of detergent fragrances in causing allergic reactions in consumers. Test data collected and published by SDA showed that detergent formulators were selecting and using fragrances responsibly. Still, the industry, aided by the Research Institute for Fragrance Materials, monitors fragrance components to avoid future problems.

Another issue raised was the eutrophication of bodies of water. Although detergents have been blamed, they do not contribute as much as such sources as land run-off and human and food wastes, Booman said. As a result of fears over eutrophication, however, the use of phosphates in detergents became—and remains—controversial. He added that the use of NTA as a phosphate replacement was challenged by New York State "and thus NTA remains unused in laundry detergent formulations in the U.S. today." Canada, however, does allow NTA use.

Booman pointed out that issues keep cropping up that often are not specific to the detergent industry alone. One major problem currently under scrutiny is the disposal of product packages and unused products, particularly as landfills close down and as evidence of groundwater contamination appears at existing and former landfill sites.

"The very complexity of the host of human health and environmental effects that need to be considered in developing a product today suggests that more and more innovation in selecting and combining ingredients into formulations will be called for in the years ahead," he said.

## Program announced for industry conference

A joint AOCS/CSMA detergent industry conference on "New Horizons '89" will be held Oct. 29–Nov. 1, 1989, at the Hotel Hershey, Hershey, Pennsylvania. General chairpersons are Ted P. Matson of Vista Chemical Co. and Paul Sosis of Witco Corp. For further information, contact AOCS, PO Box 3489, Champaign, IL 61826-3489, USA. The following outlines the tentative technical program.

#### SESSION 1 Dinner and Keynote Address

Chairperson: Paul Sosis, Witco Corp.  
Sunday evening, Oct. 29

#### Cocktails and Dinner

Announcements—Paul Sosis  
Introduction of session chairpersons—Ted Matson  
Introduction of keynote speaker—Paul Sosis

Keynote speaker—William Mahoney, executive vice president, Witco Corp.

#### SESSION 2 Surface Chemistry

Chairperson: John F. Scamehorn, University of Oklahoma

Monday morning, Oct. 30

Announcements—Ted Matson

Introduction—John F. Scamehorn

Applications of Surfactant Mixtures, Randal M. Hill  
Surfactant Precipitation, John F. Scamehorn

Break

Dynamic Surface Tension, Milton J. Rosen

Micelle Formation in Amphoteric Surfactant Systems,  
James F. Rathman

The Requirements for Optimum Detergency, Herbert  
L. Benson

## Fragrance plant

Givaudan, a leading international producer of aroma and specialty chemicals, fragrances and flavors, will construct a \$35-million fully automated manufacturing facility in the U.S. The facility will produce LILIAL, a basic aroma chemical for the fragrance industry that is widely used in soaps and detergents.

The new facility is expected to be operational within three years. The company said it will select the site for the facility by the end of 1989 after completing feasibility studies.

The company also is modernizing its LILIAL plant at its headquarters complex in Vernier-Geneva, Switzerland. That \$13-million product is scheduled for completion in early 1991.

Givaudan currently manufactures LILIAL in Switzerland at Vernier-Geneva, in the U.S. at Clifton, New Jersey, and in Spain at San Celoni, near Barcelona.

## Malaysian venture

The Chemicals Division of The Procter & Gamble Co. (P&G) is forming a joint venture with Felda Mills Corp. to build a natural alcohol plant in Malaysia at an estimated cost of \$50 million. The joint venture partner is a subsidiary of Felda, the Federal Land Development Agency in Malaysia.

The joint venture company will be called FPG Oleochemicals Sdn. Bhd. P&G will have 50% ownership in the venture.

The plant will be located in Kuantan, a port city on the northeast coast of the Malay peninsula. It is scheduled to begin production in early 1992. Annual capacity will be 40,000 metric tons. Felda will supply palm kernel oil for the plant, which will use proprietary natural alcohol technology developed by P&G.

P&G's Chemical Division will market the natural alcohols produced, with expected sales in Europe, North America and Asia. Felda will provide access to its crushing and refining facilities and to its transportation and storage operations.

## Latex research

Hoping to develop improved-performance latexes, BASF Corp. is taking part in research aimed at providing a better understanding of how surface-active agents work.

The research concentrates on versatile surfactants that depend neither on toxic nor costly raw materials, according to E. Michael Dexheimer, manager of chemicals research and development for BASF. Laboratories at BASF's Wyandotte, Michigan, research center are collaborating with company researchers in West Germany and other researchers in the U.S. and abroad. The long-range project, initiated three years ago, includes a study of the effects of all surface-active agents on emulsion polymerization.

The BASF study has confirmed that anionics create the smallest particle size, allowing higher solid loading and faster drying time. Best results in tests often occurred when anionic and nonionic surfactants were mixed to maximize the desirable qualities of each, Dexheimer said. These Pluronic surfactants offer good freeze-thaw stability as well as mechanical and electrolyte stability, which anionic and conventional nonionic agents do not.

Also, Pluronic and Tetronic surfactants displayed unusually low-foam generation and good mechanical stability toward shear, Dexheimer said, noting that Pluronic surfactants also showed much lower water sensitivity than anionics.

"We have found that this new breed of surfactants is capable of combining chemical, steric, freeze-thaw, mechanical and electrolyte stability. Their value is further enhanced by the fact that because of their ability to defoam, we now can bypass the use of conventional defoaming agents, which sometimes have an adverse effect on stability, coalescence and adhesion of the paint film," Dexheimer said.

## Ethyl to build

Ethyl S.A., Ethyl Corp.'s Belgian subsidiary, will build a world-scale plant in Belgium to manufacture linear alpha olefins. The total cost of the project is expected to be approximately \$100 million.

The facility will be built at Feluy, Belgium, where the company currently produces a number of chemical intermediates and petroleum additives. Start-up is planned for the second half of 1991, with initial capacity set at 200,000 metric tons per year.

The facility will be Ethyl's first alpha olefin production plant in Europe. It will produce alpha olefins in the C<sub>6</sub>-C<sub>18</sub> range, focusing on hexene, octene and decene, but will also include substantial production of C<sub>12</sub>-C<sub>14</sub> and higher carbon numbers. Primary merchant markets include comonomers for polyethylene and intermediates for surfactants as well as captive and merchant requirements for lube oil additives and synthetic lubricants.

Part of the plant's output will be used as raw materials in a polyalphaolefin plant that Ethyl S.A. also is building at Feluy. This 36,000-metric-ton-per-year unit is scheduled to start up during the second quarter of 1990.

## Joint venture

Ethyl Corp. and Texaco Chemical Co. have announced a long-term joint venture to supply alcohol ethoxylate, a base material used in manufacturing household detergents, personal care products and industrial surfactant products.

The alcohol ethoxylates produced under the agreement will be marketed by Texaco under the SURFONIC brand name.

(Continued)

## SURFACTANTS & DETERGENTS NEWS

Using alcohol produced at Ethyl's plant in Pasadena, Texas, Texaco Chemical will manufacture the alcohol ethoxylates at its Port Neches, Texas, chemical plant.

### Peroxide growth

Hydrogen peroxide producers in North America report annual growth rates of over 15% for the past year, with year-to-date growth through April 1989 at 21%. Producers predict annual growth will be at least 10% for the next five years.

In response to growing hydrogen peroxide demand, Du Pont Canada has announced it will build a \$100-million hydrogen peroxide plant in Gibbons, Alberta, Canada, near Edmonton. The plant, scheduled to start up late in the third quarter of 1991, will be designed to produce 80 million pounds per year.

Interox America currently is building a 45-million-pound capacity facility in Longview, Washington, in the U.S.; FMC Corp. is building a 70-million-pound capacity plant in Prince George, British Columbia, Canada.

The Interox plant is scheduled to start up in the third quarter of 1989; the FMC plant is to go on-line in 1990.

Meanwhile, Witco Corp.'s Argus division has announced it is consolidating organic peroxide production at Marshall, Texas. The plan includes expansion at Marshall and the sale of a benzoyl peroxide paste business to Akzo Chemie America. Under the plan, an organic peroxides pilot plant and a process development laboratory at Richmond, California, will be moved to Marshall; R&D facilities, however, will be maintained at Richmond.



Robert T. Betz

### Betz heads Emery

Henkel Corp. has appointed Robert T. Betz as executive vice president to lead the Emery oleochemicals group recently acquired by Henkel from the Quantum Chemical Corp. Emery is a leading marketer of oleochemicals and specialty chemicals in North America.

Henkel Corp., the U.S. subsidiary of Henkel Group of West Germany, assumed operational responsibility of Emery on April 17, 1989. Betz joined Emery in 1963 and had served as president of Quantum's Emery Division. In his latest position, Betz reports to Harald P. Wulff, president and chief executive officer of Henkel Corp.

### Witco restructures

Restructuring its Humko Chemical Division, Witco Corp. has named B. John Bogdanoff and Stewart E. Gloyer vice presidents and business managers.

Bogdanoff has been named vice president and business manager for fatty acids, glycerine and esters. He has more than two decades of experience with Humko Chemical. He most recently served as vice president of sales and marketing.

Gloyer, meanwhile, has been named vice president and business manager for fatty nitrogen chemicals. He joined Witco Corp. in 1969 and most recently served as vice president of research and development.

### CMRA officers

The Chemical Marketing Research Association (CMRA) has elected Ralph M. Hoag of SRI International as its president for 1989-1990.

Other officers are E. George Sabino Jr., Union Carbide Corp., president-elect; James A. Thatcher, PQ Corp., treasurer; and Michael T. Devanney, Quantum Chemical Corp.'s USI Division, secretary.

New directors are Laurence R. Muir of Esso Chemical Canada and Edward T. Sauer of The Procter & Gamble Co. Directors serving the second year of a two-year term are H. James Bigalow of FMC Corp. and William J. Morrison of Air Products and Chemicals Inc.

CMRA will hold its fall meeting Sept. 24-27, 1989, at the Mount Washington Hotel and Resort, Bretton Woods, New Hampshire. For further information, contact Mary J. Carrick, CMRA, 139 Chestnut Ave., Staten Island, NY 10305-1895.

### Call for papers

Papers are being sought for the XXI Congress of CED/AID on Surfactants, to be held March 14-16, 1990, at the Hotel Princesa Sofia, Barcelona, Spain.

The congress, organized by the Asociación de la Industria Española de Detergentes, Tensioactivos y Afines (AID) and el Comité Español de la Detergencia (CED), will focus on the following surfactant and detergent topics: synthesis and analysis, physico-chemistry, new developments and applications, cosmetic chemistry and environment.

Simultaneous translation will be provided in Spanish and English. Two- or three-page summaries of talks in English or Spanish must be submitted by Sept. 30, 1989, with notification of paper acceptance given by Nov. 1, 1989.

Anyone wishing to submit a paper or wishing further information should contact Secretaría de la Asociación de Investigación de Detergentes, Jorge Girona 18-26, 08034 Barcelona, Spain.

---

**SURFACTANTS & DETERGENTS NEWS**


---

## Japanese industry

The Japan Soap and Detergent Association has chosen Kosaburo Sagawa, chairman of Kao Corp., as its new president. At the association's recent meeting, Sagawa reported that Japan's detergent market in 1988 decreased to 250 billion yen, representing 92% of that for 1987. Textile softener and bleaching sales also decreased to 86% of those of 1987.

According to Japan's Ministry of International Trade and Industry, Japanese soap and detergent production figures for 1988 included 183,000 tons of soap; 903,000 tons of synthetic detergents; 196,000 tons of haircare products (shampoo, rinses and hair treatment); 138,000 tons of skin care products; 254,000 tons of textile softeners; 107,000 tons of bleaching agents; 35,000 tons of acidic and alkaline detergents; and 47,000 tons of cleansers.

---

## News briefs

AOCS member **Nelson F. Borys** has been named director of research and development at **Harcros Chemicals Inc.** in Kansas City, Kansas.

**PQ Corp.** has appointed **Cecil M. Burns** as senior sales representative for its NYACOL inorganic colloids product line.

**Union Carbide Corp.** has created a new holding company and established its domestic chemicals and plastics businesses as a separate wholly owned subsidiary, called **Union Carbide Chemicals and Plastics Co. Inc.** The holding company will assume the **Union Carbide Corp.** name. Also, Union Carbide has announced its intention to purchase **BP Chemicals'** silicone surfactant business. Included in the purchase would be production facilities in Antwerp, Belgium, and Hythe, United Kingdom, and research and development activities in Meyrin, Switzerland. Meanwhile, **Charles R. Kline** has been appointed vice president of operations for Union Carbide's **Solvents and Coatings Materials Division.**

**CIBA-GEIGY Corp.** has awarded a contract to **Fluor Daniel**, a unit of Fluor Corp., to provide construction management services for an additive expansion project at the company's facilities in McIntosh, Alabama. The multi-product site at McIntosh produces additives such as whiteners, brighteners, herbicide products and specialty chemicals.

A fire in the fractionation section of the ethylene unit at **Quantum Chemical Corp.'s** Morris, Illinois, plant in early June caused an estimated \$50 million in property damages, according to preliminary estimates. The com-

pany said it hoped to get the plant back in operation at 85% capacity by mid-August.

**The National Association of Corrosion Engineers (NACE)** now offers a home study course on protective coatings and linings. The cost is \$475 for NACE members, \$550 for nonmembers. For more information, contact the Education and Training Department, NACE, PO Box 218340, Houston, TX 77218.

Due to the merger of **Montedison's** major chemical businesses with **EniChem**, **EniChem Americas** is now part of the newly created chemical group, **Enimont.**

**Richard Marquis** has been named president of **Croda International Inc.**

**Pilipines Kao Inc.** of the Philippines is constructing a plant to produce tertiary amines, hydrogen and nitrogen at Hasan on Mindanao Island. Start-up is slated during 1989. The products will be used as foaming agents, textile softeners, preservatives and bactericides. Meanwhile, **Kao Corp.** of Japan has acquired 75% of the stock in **Goldwell GmbH**, a manufacturer of haircare products for barber and beauty shops in West Germany. Kao has announced plans to acquire the remaining stock during the next five years.

**Steve Pearce** of **PFW (UK) Ltd.** has been elected president of the **Society of Cosmetic Scientists.** **V.H. Hyde** of **Golden Ltd.** has been named vice president. **Angela Janousek** of **Beecham Products** is immediate past president.

**Stepan Canada Inc.,** **Stepan's** Canadian subsidiary, has acquired the anionic surfactants business of **Canada Packers Inc. (Toronto).** The unit will be integrated into **Stepan Canada's** current business. **Stepan** also plans to build a sulfonation facility in Canada.

**Unilever Group** has broken off negotiations to acquire the toiletries, cosmetics and fragrance businesses of **Fabergé Inc.** from **Riklis Family Corp.** Meanwhile, **Unilever N.V.** has established a sales subsidiary, **Lipton Lever K.K.,** in Japan as part of a restructuring of its Japanese operations. The firm combines the sales divisions of **Nippon Lever K.K.** and **Lipton Japan K.K.** **Nippon Lever** is building a plant to produce fabric softeners and other detergent products in the Haga industrial park in Tochigi Prefecture.

**Pettibone-Chicago Inc.** and **Kaltron Inc.** have agreed to merge their chemical marketing and distribution businesses into **Kaltron/Pettibone Inc.,** with offices in Elk Grove Village, Illinois.