

ETAD[®]

The Ecological and Toxicological Association
of Dyes and Organic Pigments Manufacturers

Annual Review 2007



Table of Contents

Mission Statement	1
<hr/>	
Preface from the President	2–3
Membership	4
Finance	5
<hr/>	
33 rd General Assembly	6
<hr/>	
Pigments Operating Committee (POC)	7
European Operating Committee (EOC)	8–9
Regulatory Affairs Committee (RAC)	10–11
Japanese Operating Committee (JOC)	12–13
ETAD North America (ENA)	14–15
Brazilian Operating Committee (BROC)	16
Chinese Operating Committee (CHOC)	17
Indian Operating Committee (IOC)	18
<hr/>	
Activities & Information	19
<hr/>	
Board of Directors 2007/2008	20–21
Committee Members and Officers	
<hr/>	
Code of Ethics	22–23
Benefits of ETAD Membership	24
Organisation Chart	25
<hr/>	
ETAD Members	Back Cover
Contact Information	Back Cover



Mission Statement

The purposes of the association are the following:

To coordinate

and unify the efforts of manufacturers of synthetic organic colorants to minimise possible impacts of these products on health and the environment.

To represent

the positions and interests of the manufacturers of organic colorants towards authorities, public institutions and media.

To achieve

these ends by the most economic means without reducing the level of protection of health and the environment.

To promote

responsible environmental and health risk management during manufacture, transport, use and disposal.

To encourage

harmonization of health and environmental regulations in key geographical areas.

To enhance

the recognition of the commitment of ETAD members to responsible behaviour with respect to health and the environment.

Preface from the President

It was a great honour to be elected ETAD President at the General Assembly on May 22, 2007 in Shanghai.

I would like to take this opportunity to thank my predecessor Dr. Erwin Stark for his visionary leadership and dedicated service to ETAD for many years and especially during the last two years as president of the Association.

ETAD, founded in 1974, has needed to transform itself over recent years in response to the major shift of the colorants manufacturing industry and its major customer industries shift to Asia. The companies which founded ETAD were mostly large conglomerate chemical companies, primarily in Europe and Japan, and at that time the colorants business was particularly profitable. Since then globalisation, the transfer of the customer industries to the lower cost markets in Asia and the major restructuring of the chemical industry have ended the former dominance of dye manufacturing by the so-called "traditionals". Undoubtedly the stringent chemical regulations introduced in the leading industrial countries accentuated the rate of decline of their colorants manufacturing industry.

The beneficiaries have been the Asian manufacturers of colorants and intermediates, which have achieved a rapid growth of their colorant production. Most have started as commodity manufacturers and they now pay increasing attention to quality and reliability to establish themselves as high quality product suppliers. Inevitably, with increasing prosperity and a high growth rate these countries will face major difficulties to achieve a sustainable balance between production output, environment, economic development and energy efficiency.

Chemical legislation in Asia, particularly in China and India, are rightly following the needs of the industry to develop regulations securing safe products and a sustainable future. In Europe, the REACH (Registration, Evaluation and Authorisation of Chemicals) regulation came into force in June 2007, providing guidance of future working rules and regulations. It was a good decision, supported by ETAD, to develop clear and common rules in registration of all chemicals in the markets protecting our members' high standards in product choice and sustainability of our industries.



ETAD needs to strengthen its role as an effective advocate in Asian countries

REACH is a benefit for the community, but it places a heavy burden on the manufacturers and importers of chemicals to EU countries. Collaboration and bundling of our knowledge and efforts to achieve the registration requirements will be necessary. SIEFs (Substance Information Exchange Forums) will be formed after the pre-registration phase. Obviously, many not yet evident difficulties will need to be overcome. But nevertheless, this will, in the end, assure sustainability of our industries' segment and help us all to be even more appreciative of what and how we produce.

ETAD members were always respected by our customers for their high standard in protecting the users, technical and scientific competence on dealing with technology and product issues as well as high standard in responsible care program. Our members fulfil these high requirements described in our Code of Ethics.

As in past years, this Annual Report includes the reports of the various committees on their activities during the past year. As I reviewed these I was particularly conscious that the activity level in the various regions is not in line with what would seem necessary if ETAD is to fulfil its role for the industry in the years immediately ahead. In Europe effective advocacy must be maintained as the REACH requirements still pose major challenges for our industry sector. On the other hand there would seem to be an urgent need to establish a clear vision of ETAD's role, particularly in China and India, and an action plan to establish ETAD as a credible and effective advocate for the industry in these key regions. Attention must also be given to ensure that they have a realistic level of financial and personnel resources, as well as ETAD's organisational support.

ETAD's success largely depends on the expertise and active support of technical and regional committee members. Representatives of member companies from all regions are encouraged to participate in this collaboration, which is the strength of our association.

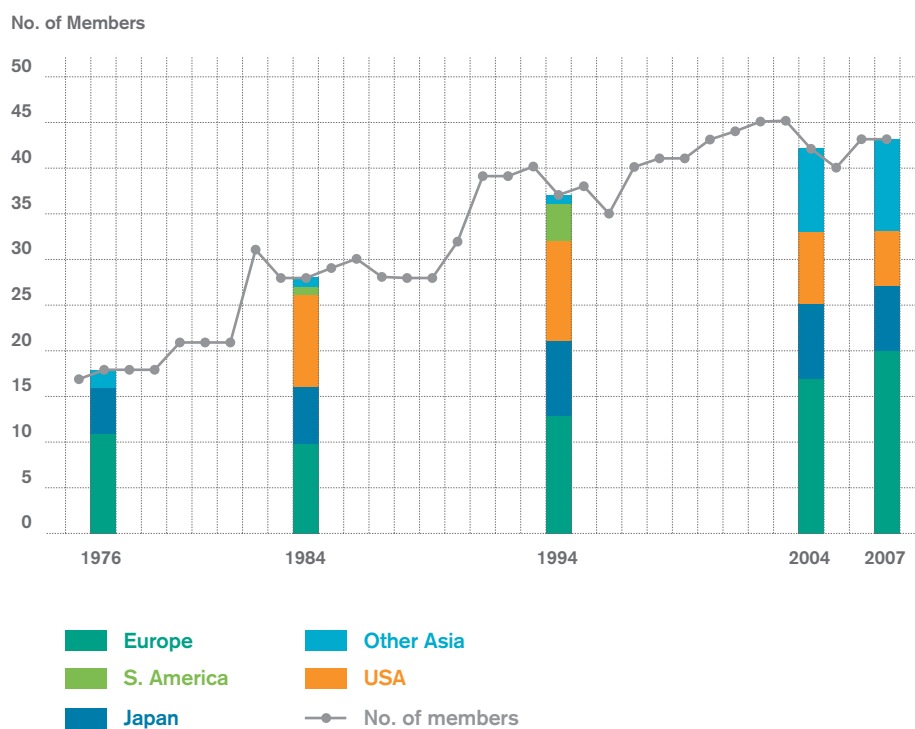
This is the opportunity to thank all the members of the Board and committees and the ETAD staff for their dedicated commitment.

Dr. Davor Bedekovic
(Huntsman Materials and Effects,
Schweiz GmbH)

Membership

Jiangsu Taifeng Chemical Industrial Co., Ltd. (China) and Jay Chemical Industries Ltd. (India) have joined ETAD in 2007. Stahl International bv resigned its membership effective 31st of December 2007.

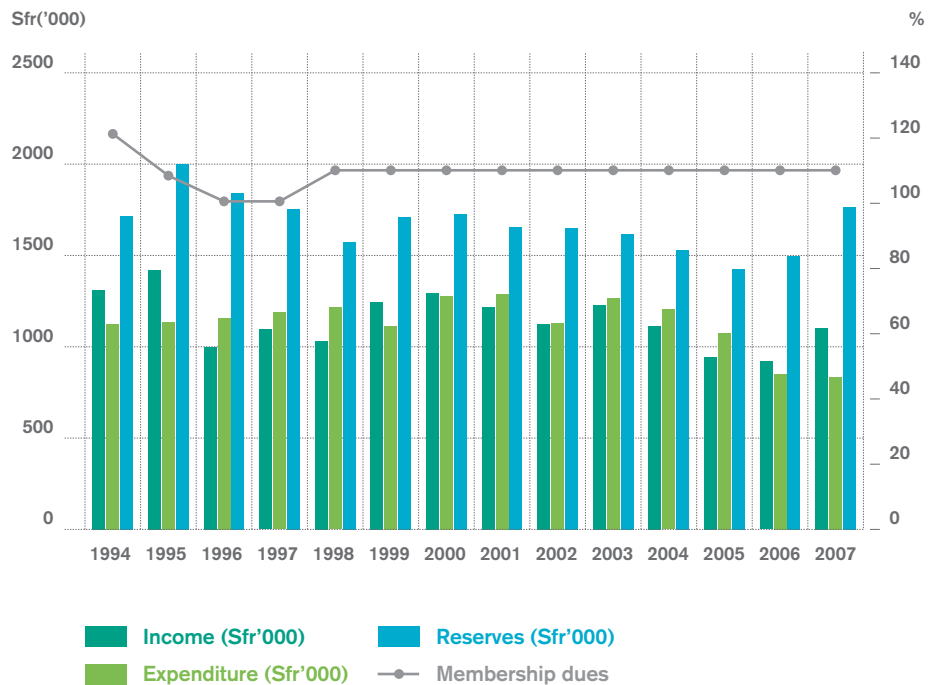
Fig. 1 – Growth and changing regional composition of the ETAD membership



ETAD is a non-profit association. The operating expenses are recovered mainly by means of payments by the ETAD members. In 2007, total income was SFr. 1.09 million compared with total expenditure of SFr. 0.82 million, resulting in a profit of SFr. 266'593.53.

The accounts of ETAD North America are kept separately from those of the Basel office to mitigate the effects of exchange rate fluctuations on the financing of the operations in North America. During 2007, the total income was \$124,000 and total expenditure \$87,153. Against a negative opening balance of \$38,858, the positive change in net assets of \$36,847 results in a negative closing balance of \$2,011. In the face of declining U.S. dyes sales and resulting loss of membership dues income, the ETAD North America members continued in 2007 to make a special effort to minimise the scope of their activities and corresponding operating expenses. This helped to all but eliminate the large deficit that had accrued over the past few years.

Fig. 2 – Summary of Income / Expenditure 1994 - 2007 (excluding ETAD North America)



33rd General Assembly



The 33rd Ordinary General Assembly of ETAD was held in the Hilton Hotel, Shanghai on May 22, 2007 commencing at 16.30 hr.

The President, Dr. E. Stark, opened the proceedings by welcoming the attendees to this 33rd anniversary meeting.

Out of the current ETAD membership of 44 companies, 35 were present or represented by proxy. Of the current total vote entitlement of 104 votes, 92 votes were represented at the meeting.

The Minutes of the 32nd Ordinary General Assembly 2006 and the Annual Report 2006 were approved unanimously. The General Assembly also approved unanimously the report of the Treasurer and chartered accountants (PriceWaterhouseCoopers AG) and the Budget for 2007, as presented by Dr. John Coy. Due to the financial situation it was possible to avoid any increase in membership costs for the tenth successive year. Dr. T. Helmes presented the accounts for ETAD North America and its Budget for 2007.

As is customary, the Board proposal for its composition for 2006/2007 was presented to the Assembly. There were no additional nominations in response to the invitation by ETAD Legal Counsel, Dr. Uebersax. The Board was elected unanimously as follows:

Dr. Davor Bedekovic
Huntsman Materials & Effects
(Schweiz) GmbH
President

Dr. Ulrich Ott
Clariant International Ltd.
Vice president

Dr. John Coy
Ciba Inc.
Treasurer

Dr. Ilesh Bidd
Fujifilm Imaging Colorants Ltd.

Mr. Steve Liu
Sun Chemical (China)

Mr. Daniel Gronier
Francolor Pigments SA

Dr. Sören Hildebrandt
BASF AG

Mr. Yoshimi Yamada
Huntsman Japan KK

Mr. Peter Krummeck
Sun Chemical Pigments International

Dr. Stark concluded the session remarking the importance for ETAD to acquire a larger visibility and further establish its position as a reliable reference for ecological and toxicological issues. The creation of a specific "ETAD label" for colorants, for example, was proposed as a way to enhance ETAD's recognition.

After his closing remarks Dr. Stark handed over to the new President, Dr. Bedekovic. Dr. Bedekovic mentioned that ETAD, in spite of the changes since its foundation, has succeeded in maintaining its role as an international association with a widely recognized commitment to health and the environment. This role has become even more important in the current economic situation, where the global market brings about a constantly increasing interaction between countries worldwide. Focal points for the further development of ETAD are:

- Enhanced companies feedback.
- Promotion of product stewardship and continuous improvement.
- Further development of a solid collaboration between ETAD and Asian countries.
- Preservation of the quality standard associated with the name ETAD.

In connection with the General Assembly a seminar on colorant safety in China was held at which the following presentations were made:

- **Mr. Shi Xianping (CDIA):** Responsible Care Activities in China.
- **Mr. Wang Zhutian (National Institute of Nutrition and Food Safety, China CDC):** Chinese approval system for Food Contact Materials.
- **Ms. Elin Robling (H&M):** Scope and Experience with the H&M standard.
- **Mr. Steven Yu Yunbiao (BASF):** Global Compliance with Governmental and Industry Standards and Responsible Care of Colorants for the Polymer Industry.

Pigments Operating Committee (POC)

The work of the ETAD POC continued in 2007 with monitoring the increasing demands made by international legislation and their effects on the pigments industry.

Besides the developments in Canada on PBT categorisation under DSL and the HPV Programs of Europe, USA and Japan, special attention was drawn to the worldwide progress in implementation of the Globally Harmonised System (GHS) on classification and labelling.

In addition to on-going projects related to pigments in food contact (cf. 4th Amendment to Directive 2002/72/EC, Council of Europe Resolution AP (2005)2, Chinese Food Contact List) the revision of Annex A of Toys Standard EN 71-7, Finger-paints and the improvement of Toy Standard EN 71-11, Organic chemical compounds-Methods of analyses were added as new projects to the working lists of the POC and its Analytical group.

The most intensive work in 2007 was focussed on the following topics:

PBT/vPvB

Since existing QSAR models are inappropriate for the prediction of the PBT properties of organic pigments, ETAD POC has developed a new approach and test method for organic pigments based on octanol and water solubility. In accordance with this new ETAD approach the majority of organic pigments will not fulfil the PBT criteria.

The UK authorities who have the lead on this topic suggested that the ETAD test method for the determination of octanol should be validated with substances of known K_{ow} . The analytical experts' team, which has developed the octanol and water solubility method, will perform a GLP validation study once the methods have been written up according to the OECD 105 format. Once the validation results of the solubility methods are available the ETAD approach should be proposed as a new OECD method and the K_{ow} QSAR models shall be updated for the group of organic pigments.

Primary Aromatic Amines

The development of a simpler test method for the determination of extractable primary aromatic amines in pigments based on ETAD Analytical Method No 212 continued in 2007.

A further refinement of ETAD Method No 212 was found to be necessary to improve robustness and reproducibility of the work-up procedure described in the revised method. This will be done by the Analytical experts' team on several commercial samples of PY12 in 2008.

REACH

The sub-committee formed in November 2006 under the chairmanship of Dr. E. Dietz continued its work as a trial consortium for PR 112 as the model substance. There were at least 7 meetings in 2007 mainly focussing on refinements of given model consortium agreements, data gap analyses, cost allocation schemes, substance definition of organic pigments and toxicity assessments. The substance definition of organic pigments in connection with a firm toxicity assessment of the base molecule and potential impurities was found most critical.

In 2008 the trial-consortium (which ends on 24.05.2008) will focus on topics that have not yet been considered like IUCLID 5, downstream users and exposure scenarios.

Inefficient double work can be avoided

REACH

The EOC has continued its efforts to search for practical implementation of the changing global legislations.

Rising awareness in society of the effects of chemicals has led to an increased number of interest groups, e.g. governments and retailers, which introduce their own requirements for the use of chemicals and dyes. As a direct consequence the EOC has started a proactive approach to cooperate with those institutions. By this means ETAD has the role of an independent adviser with scientific foundation and hence can influence right from the beginning any new regulation or publication.

The imminent legislation for ETAD member companies to cope with is REACH. As in the previous years a major effort has been devoted to this subject. In order to work more focused on certain aspects of this legislation an ETAD Working Group has been formed. The member companies were able to send their delegates to this separate Working Group to analyze the practicality of REACH.

The concepts of substance identification, data requirements and data sharing were elaborated upon. For that purpose Disperse Orange 30 was selected as model substance by the EOC as a consequence of prior data gathering among member companies. As outlined in last year's report, the data gathering of acid and disperse dyes based on CAS numbers resulted in the largest interest of selecting Disperse Orange 30 for a trial registration according REACH.

During the activity of this working group a QSAR (EPIWIN) revealed Disperse Orange 30 to be classifiable as vPvB. As this dye is a general representative of many disperse dyes the decision was taken to generate experimental data. The octanol and water solubility will be determined to calculate the logP_{ow}.

Member companies raised the question whether a concerted effort by various organizations could lead to a more successful influence on legislative bodies. Furthermore the activities within each company can be better coordinated and inefficient double work can be avoided. As a consequence of this effort, ETAD established a closer contact with IFOP (Industrievereinigung Farbstoffe und organische Pigmente, member of the German chemical industry association VCI). IFOP and ETAD agreed to exchange information about any activity to maintain an equal wording in their positions.

ETAD and IVDK (Informationsverbund Dermatologischer Kliniken)

The contact with the IVDK was intensified through a separate meeting on January 31st, 2007 with ETAD EOC member companies. IVDK's report of approximately 4000 textile allergy cases was put into context. For the future a more intense cooperation was agreed as data gathering seems to be the key problem and extrapolation are often used in order to fill the missing gaps. As a start ETAD shared with IVDK the questionnaire, which had been sent out to dermatologists within the original ETAD projects. Furthermore it was agreed that future cooperation will be based on the Hatch and Maibach project.

Eco-labels and Retailers

All member companies of the EOC screen the landscape for arising Eco-labels and Restricted Substance Lists of retailers. Strong competition between the retailers leads them to seek to differentiate their products in terms of quality attributes. This has led to a diversity of increasingly stringent restricted substance lists. ETAD's efforts to screen these lists for scientific soundness of the given limit values for impurities, e.g. trace metals, have already lead to changes and some harmonization. In particular:

- Puma's S.A.F.E. document was modified in the relevant chapters in response to ETAD's input.
- H&M provided a draft list for our comments, and the EOC responded with its input to provide a restricted substance list that can be supported by all member companies.
- On eco labelling the EU started an approach on all substances with R 50, R 51, R 52, R 53 to be banned. Coordinated efforts with Dr. Volker Schröder of IFOP led to a dual response to the EU authorities by ETAD and IFOP. Both were phrased that a consistent position was presented to the authorities.

Canadian DSL

Together with ETAD North America efforts were undertaken to exclude disperse dyes from being classified as PBTs. For this reason it was agreed to perform a bioconcentration study on Disperse Blue 77 and Disperse Orange 30 according to the OECD 305 study protocol.

A joint approach towards the CDSL and REACH in Europe was found to be helpful as there is an increasing interchange between authorities.

French Regulation on Formaldehyde

The concern was that the legislation implied that only the absence of formaldehyde would guarantee compliance since a defined limit was missing in the legal text. The French authorities were contacted and responded to this concern clarifying that the set limit in preparations corresponds to 0.1%.

Regulatory Affairs Committee (RAC)

The Regulatory Affairs Committee (RAC) is composed of experts who are responsible within their companies for world-wide regulatory compliance. During 2007 six ETAD member companies participated in the RAC committee.

The role of the Regulatory Affairs Committee (RAC) continues to grow in importance and scope.

RAC's main remits are:

- Monitoring the developments of chemical control regulations worldwide.
- Ensuring awareness of new regulatory requirements among member companies.
- Providing advice on the interpretation of the regulatory requirements.
- Assessing the potential impact for the colorants industry.

Individual RAC members are allocated the responsibility to report on particular countries. This useful specialisation and the sharing of workload increase efficiency.

REACH

REACH entered directly into EU Member States national law on June 01, 2006. The **European CHemicals Agency (ECHA)** has become operational and the primary software for registration is now available. However, despite the conclusion of the legislation, some of the key **REACH Implementation Projects (RIPs)** are still not completed. Implementation will span over 11 years, with a specific REACH timeline.

This is a most complex and far-reaching Regulation, and half-day sessions have been dedicated to each of the three RAC meetings throughout 2007. RAC generated an Excel Matrix of open questions to be placed in ETAD's e-room to be up-dated by RAC members, or the REACH Working Group for dyes, as information becomes available. This is invaluable as new questions and queries arise in the understanding and appreciation of the minutiae in the REACH Regulation.

The ETAD REACH Working Group for Dyes held 5 meetings throughout 2007. The remit was to undertake a virtual REACH Registration for Disperse Orange 30. This became a "steep learning curve" for all participants endeavouring to apply and negotiate the tortuous registration route whilst being mindful of the numerous legal ramifications. The IUCLID 5 software has been installed at the ETAD offices to mimic the process of registration data entries. Project work continues.

Globally Harmonised System

Classification and Labelling of Chemicals

The development of GHS was monitored by the RAC committee during 2007 and it was decided to plan a GHS workshop in spring 2008. It is advised to refer to the UNECE website for latest information related to GHS.

ETAD's Guidance document

The RAC has reviewed and will consider amendments to the Guidance document due to the implementation of the REACH Regulations and the influence of GHS. The updated document will be available in Spring 2008.

We would like to thank Mark Meesters, former chairman of the RAC, for his enthusiasm and valuable contributions to the RAC

Country Monitoring

National regulatory activities have been closely observed and will be placed in the ETAD e-room. The latest versions of the Product Registers were up-dated in October 2007.

General

Another milestone was reached in the history of ETAD when the 75th RAC Meeting was held in April 2007. All present were mindful of the very significant contributions made by numerous dedicated and committed personnel in the past. As a result of changes in RAC membership, new responsibilities for specific country monitoring were agreed and allocated. This is to ensure that the RAC effectively monitors national changes in regulations.

Japanese Operating Committee (JOC)

The Japanese Operating Committee consists of six member companies (three European subsidiaries and three Japanese dye manufacturers), which address the environmental and toxicological aspects of dyes. Unfortunately no companies of the Pigment sector are represented in the committee.

For 2007 two main topics can be highlighted which are not strongly connected to the dye sector, whereas one topic is related to organic pigments.

The highlights can be summarized as follows:

PRTR law

It is a legal requirement to update the Pollutant Release and Transfer Register (PRTR) Law scheme, if amendment is required to make it more effective. Discussions were started during the first half of 2007, and an interim report was published in June 2007.

In the interim report, recommendations for a basic concept of making effective implementation of the international agreements on chemical substance management were described.

One of the most important proposals is to cooperative developments with the Chemical Substance Control Law which will be reviewed in 2008 as well, and this will enhance the effectiveness of the management of industrial chemicals.

In addition, it is considered that simplicity of the specific chemical list is required. Currently two chemical lists specified in the law are available and the management procedures are different.

Further discussions will be continued in 2008.

HCB Contaminations in dyes/pigments and their intermediates

Discussions are continuing for setting the limit values according to the BAT concept. The latest information is as follows:

When a chemical product contains 1st class specific chemicals such as HCB (Hexachlorobenzene) in trace amounts as a by-product or an impurity, and risk assessments show that there are no adverse effects to human and animal health and plants such contaminated chemical products are not regarded as 1st class specific chemical substances.

Overall, if a chemical or product is contaminated with such impurities, authorities have to be informed about the formation mechanism of such impurities, quantity, reduction measures, final use and possible risk. The limit value will be set by the authorities on the basis of that information.

Regarding contamination with HCB, the established limit concentration is equal to or lower than the established limit value of 200 ppm in tetrachlorophthalic anhydride (TCPA) and 10 ppm in pigments derived from TCPA. However, even though chemicals or products containing HCB or TCPA below the established limits will not be classified as 1st class chemicals, it is legally demanded that authorities have to be informed about the fact of contamination.

Others

IHSL (Industrial Health and Safety Law)

The Labelling and SDS system in compliance with GHS requirements has started for specific chemicals and their mixtures. The old style Safety Data Sheets may be used during the transitional period.

Dioxin contamination in disperse dyes

In some cases enforcement laboratories have detected in river waters dioxin concentrations above the limit of 1.0 pg-TEQ/L, which defines the threshold for environmental contamination.

Even though the effluents from dye houses are below the limit of 1.0 pg-TEQ/L, a research group reported that the dye houses effluents have partially contributed as source of these contaminants.

Therefore, ETAD Member companies decided to check the content of dioxin in their products and found out that they make no significant contribution to the observed environmental contamination. Unfortunately dioxin limit values have not yet been set for industrial products. The current levels of contamination are not practically significant for textile-finishing products.

ETAD North America (ENA)

As the North American dyes manufacturing business remained in decline during 2007, ETAD North America continued to operate on a limited basis focussing only on the core activities of networking, information exchange, and tracking industry and regulatory developments in the U.S. and Canada. This approach allowed ETAD to maintain a presence in North America while at the same time reducing member company costs to a level more in line with the current economics in the industry.

Regulatory Developments in the United States

ETAD North America monitored the following regulatory issues in 2007 for potential impact on the dye manufacturing industry:

- U.S. Chemical Site Security regulation. The Department of Homeland Security has published a list of chemicals of concern for chemical site security and has established thresholds for all listed chemicals. Facilities must determine within 60 days of publication of the list whether its site is subject to regulations triggered by the list.
- Clean Air Act. EPA plans to issue a proposed rule covering area source standards for individual hazardous air pollutant (HAP) emissions of < 10 tons/year or combined HAP emissions of < 25 tons/year. Dyes manufacturing is included in the broad category of industrial organics and miscellaneous organic chemical manufacturing. A final rule is due by December 2008.
- U.S., Canada, and Mexico Security and Prosperity Partnership. The three countries announced this trilateral agreement in August to cooperate on the management of chemicals. The U.S. EPA committed to issue risk-based decisions on approximately 3,000 high production volume chemicals and to issue hazard characterizations on approximately 6,500 moderate production volume chemicals (i.e. annual production/import volumes = 25,000 – 1 million pounds) by 2012. Canada committed to completing its assessment and initiation of control action on the highest priority DSL substances, initiating its assessment of medium priority substances by 2012 and updating the DSL by 2020. Mexico will establish an information system for dangerous materials by 2012 and an inventory of commercial chemicals by 2020. Many view the SPP as an alternative to REACH in North America.
- Globally Harmonized System for Classification and Labelling. OSHA intends to issue a final GHS rule by the end of 2008 but many consider that highly unlikely.
- California Initiatives. The State of California has proposed a bill to establish a Toxic Use Reduction Act that would require the State to develop a list of toxic and hazardous substances and industry to file annual use and control reports. In a second proposal the California EPA is promoting a Green Chemistry Initiative to focus on cradle to cradle design and use of chemicals.

To develop a standard for the manufacturing of sustainable textiles

Canada

Under Canada's Chemicals Management Plan the authorities published the first four batches of highest priority substances identified in the categorization and screening of the Domestic Substances List (DSL). A number of dyes were included in these batches. For each batch of chemicals manufacturers and importers have six months to submit hazard assessment and exposure information which would be pertinent to subsequent screening risk assessments leading to recommended management and control steps.

Environment

ETAD's participation continued in a voluntary effort to develop a standard under the auspices of the American National Standards Institute (ANSI) for the manufacture of sustainable textiles. Further draft standards have been circulated for review and comment. The ANSI working group is expected to complete a final draft in 2008.

The World Bank has posted on its website final versions of its updates to general environmental, health, and safety guidelines along with 55 specific industry sector guidelines including dyes and pulp and paper.

Chemical Testing

ETAD North America continued to stay abreast of developments concerning REACH and provided information to members where appropriate to help in their planning and preparation process.

No significant developments concerning dyes appeared in any of the various biomonitoring programs. How to evaluate the results and implications of biomonitoring continues to be an issue for the chemical industry in general. Industry wants to ensure that validated screening methods and a meaningful list of subject chemicals are used.

EPA has released an initial draft list of candidates for endocrine disruptor screening. The list contains 73 substances that are either pesticide active ingredients or HPV chemicals used as pesticide inerts. No dyes or dye intermediates are listed.

As part of an independent effort to satisfy the requirements of a TSCA Section 4 test rule for unsponsored HPV chemicals, some of the North American ETAD member companies have joined a program to test C. I. Solvent Black 7 for health and environmental effects.

Brazilian Operating Committee (BROC)

Textile Industry

During 2007 Brazilian Textile Industry had to struggle with growing imports and decreasing exports of textile articles. Mainly the sector of home textiles, which experienced always-expanding export activities, was considerably affected. The strong local currency against US-Dollar is one of the main influencing factors for the reduced export activities.

Therefore, the textile trade balance turned to a 700 MUSD deficit, which has not occurred during the past years. The rapidly growing imports of garments from Asia, especially from China, are negatively influencing the occupation of the local industry. Consequently Brazilian producers have to compete with lower priced articles.

The environmental controls on the quality of wastewater are getting more severe and textile mills are very much concerned to reduce the effluent charge by introducing process water saving alternatives. Also the consciousness on water saving is gaining more followers.

Exported articles must satisfy stringent requirements and the textile processors, concerned to comply with the standards in place, select the chemicals and dyes accordingly. The chemical companies who are servicing this industry accompany this trend.

No major changes of the present situation are expected during 2008.

Pigments

During the year 2007 the situation in Brazil for organic pigments was still very difficult because the brokers who commercialize products mainly from China, Korea and India continue to practice extremely low prices. Furthermore the revaluation of the local currency vs the US Dollar was at 17% , which makes the situation of the local producers far more difficult to compete with the imports.

In mid-2007 some restrictions regarding some Chinese products happened due to environmental problems and due to this a smaller offer of imported products from China was expected. This situation was short-lived and is apparently gradually reverting to the previous one, i.e. big offers with extremely low prices.

The law project which limits to extremely low levels the use of inorganic pigments based on heavy metals, which was announced last year as a positive development, has not been approved yet by the Brazilian Congress. We hope that it will be approved within this year.

The toys and synthetic fibre producers continue to face difficulties with the competition of imported products made in China.

The CHOC continues to promote ETAD among the Chinese dye and organic pigment manufacturers

For 2007, the activities can be summarized as follows:

- The CHOC has given support that Taifeng has become the first local Chinese member company in ETAD.
- ETAD Basel was assisted to successfully arrange the 2007 General Assembly in Shanghai, China.
- The ETAD website has been translated into Chinese and is going online beginning of 2008.
- The CHOC chairman (Steve Liu) attended the CDIA Board of Directors meeting to get some firsthand information about the Chinese organic dye and pigment industry.

Indian Operating Committee (IOC)

In India, more than in other countries, it is most important to have the State and National Government on ETAD's side to bring value to its members and play an active role in deciding policy and some times even rectifying and framing it.

Success can be reported for introducing ETAD into the Central Government and State Government bodies, so ETAD is now known or at least has been introduced. This will be further reinforced by additional interaction with the government, stressing more on the regulatory aspect and contribution and less on the multinational background of the founder board (the Government is still sensitive on these kinds of issues). The goal here is to be recognized by the regulatory authorities and the policy makers as an authority in world trends on ecological and toxicological issues. The final goal is to be in a position where Government consults and even involves ETAD as part of its decision making process. This is one of the most important future functions of ETAD in India.

The IOC has established contacts with DMAI (Dyestuffs Manufacturers Association of India), which is the largest and most organized body of colorant manufacturers in India

Activities & Information

Position Papers

ETAD Comments on proposals for revision of the criteria for the EU Ecolabel for textile products (March 2007)

ETAD's REACh activities (August 2007)

Lectures

W. Hofherr: "Dyes and Pigments, Minimising their Impact on Health and Environment" at dtb¹ Eco Info Seminar on 29th of March 2007 in Munich

Meetings with Authorities and other organizations

Azo Round Table discussion with China government representatives and experts of the colorants industry on 24th of September in Shanghai

Participation at the AFIRM² Seminar on 26th of September in Shanghai

¹ dtb: Dialog Textil-Bekleidung (engl.: Dialogue Textile Apparel German textile association)

² AFIRM: Apparel & Footwear International RSL Management Working Group

Board of Directors 2007/2008

Committee Members and Officers

Board

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Dr. Davor Bedekovic
Huntsman Materials & Effects (Schweiz) GmbH

Vice President

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Clariant International Ltd.

Treasurer

Dr. John Coy
Ciba Inc.

Dr. Ilesh Bidd
Fujifilm Imaging Colorants Ltd.

Mr. Daniel Gronier
Francolor Pigments SA

Dr. Sören Hildebrandt
BASF AG

Mr. Peter Krummeck
Sun Chemical Pigments International

Mr. Steve Liu
Sun Chemical (China)

Mr. Yoshimi Yamada*
Huntsman Japan KK

Committee Members**

European Operating Committee

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Mr. Mark Dohmen
Dr. Rezzan Karaaslan
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Mrs. Helen H. O'Shaugnessy
Dr. Erich Schultz
Mr. Michael Whitehead
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Ms. Alison Marrs
Mr. Daniel Ymbernon

BASF AG
Heubach GmbH
Clariant GmbH
Francolor Pigments SA
Ciba Inc.
Sun Chemical A/S
DIC Corporation
Synthesia, a.s.
Cappelle pigments n.v.
EC Pigments
Daicolorchem EU, S.A.

ETAD North America

Dr. Joseph DaSilva
Mr. Scott Chen
Ms. Carole Dixon
Mr. J. Thomas Dukes
Ms. Sue Ann McAvoy
Mr. Randy Hinton
Mr. Peter Benn

DyStar L.P.
Everlight USA, Inc.
Clariant Corp.
Huntsman Materials & Effects Corp.
Sensient Technical Colors
Kemira Chemicals, Inc.
Tri-Tex Co. Inc.

* Representative of Japanese Operating Committee of ETAD

** These lists give membership as in March 2008.

Chinese Operating Committee

Mr. Steve Liu
Mr. Christine Cai
Dr. Xie Gecheng
Mr. Steven Yu Yunbiao
Mr. Brian Zhang
Mr. Nelson Pong
Mr. Zhao Qing Xuan
Mr. Yang Shujun
Mr. Chen Ho-Ming

Sun Chemical
Huntsman Materials & Effects (China) Ltd.
Ciba Specialty Chemicals (China) Ltd.
BASF (China) Co., Ltd.
DyStar China Ltd.
Toyo Ink Asia Ltd.
Clariant (China) Ltd.
Clariant (Tianjin) Ltd.
Everlight International Warehousing Trading
(China) Co. Ltd.

Japanese Operating Committee

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Mr. Toshio Hihara
Mr. Genji Matsubara
Mr. Osamu Motegi
Mr. Yoshimi Yamada
Mr. Masayoshi Ojima

Mitsubishi Chemicals Corporation
DyStar Japan Ltd.
Clariant (Japan) K.K.
Hodogaya Chemical Co. Ltd.
Huntsman Japan KK
Nippon Kayaku Co. Ltd.

Brazilian Operating Committee

Mr. Eide Paulo de Oliveira
Mr. Nemesio Nepumoceno
Mr. Wolfgang H. Guderle
Mr. Mauro Henke
Mr. Adriano Padua Pinhero
Mr. Cesar Vieira Pinho

Clariant S.A.
Clariant S.A.
DyStar
Dystar
BASF S.A.
Huntsman Materials & Effects

Indian Operating Committee

Mr. R. Kapoor
Mr. Prakash R. Chaudhari
Dr. M. U. Rehman
Dr. U. T. Nabar
Mr. P. Radhakrishnan
Dr. Pankaj Desai
Dr. M. A. Kotnis

Heubach Colour PVT. Ltd.
BASF
Atul Ltd.
Clariant Chemicals (India) Limited
Dystar
Colourtext Industries Pvt. Ltd.
Ciba

ETAD Staff

Basel

Dr. Herbert Motschi
Executive Director

Dr. Walther Hofherr
Deputy Executive Director

Dr. Pierfrancesco Fois
Chemist (Research and Documentation)

Ms. Diana Colombo
Administrative Assistant

Washington

Dr. C. Tucker Helmes
Executive Director of ETAD North America

Ms. Lynne Jones Batshon
Manager

Legal Counsel

Mr. W. Richard Bidstrup
Legal Counsel of ETAD North America
Cleary, Gottlieb, Steen & Hamilton

Dr. Hans-Rudolf Uebersax
ETAD Legal Counsel

Code of Ethics

Preamble

The aim of ETAD is to minimise possible negative effects on health and the environment arising from manufacture and use of synthetic organic colorants and to ensure information on the best practicable protection is provided to the purchasers of these products.

To achieve this goal and to promote the image of a responsible and safety minded manufacturing industry, it is necessary that in all aspects related to human and environmental safety, members be encouraged to adhere worldwide to a high ethical standard.

Therefore, at the proposal of the Board, the General Assembly of ETAD approves this Code of Ethics as a key policy of the Association. All ETAD member companies are obliged to comply with this Code of Ethics.

1 Principles of responsible care

ETAD members are committed to support a continuing effort to improve the industry's responsible management of synthetic organic colorants. Members shall develop, produce and distribute products in a responsible manner which protects human health and the environment from unacceptable risks during manufacture, transport, use and disposal. Specifically, members shall implement a responsible care program in which the member undertakes to manage its business in accordance with the following principles:

- To recognize and respond to any community concerns about synthetic organic colorants and its manufacturing operations.
- To produce only synthetic organic colorants that can be manufactured, transported, used and disposed of safely.
- To make health, safety, employee training, quality assurance and environmental considerations a priority in planning for all products and processes.
- To provide employees, distributors and customers information on the health or environmental effects of synthetic organic colorants and recommend appropriate protective measures to ensure their safe use, transportation and disposal.

- To operate all facilities in a manner that protects the environment and the health and safety of employees and the public.
- To promote research on the health, safety and environmental effects of its products, processes and waste materials.
- To cooperate with public authorities in establishing well-founded environmental, safety and health regulations.
- To promote these principles of responsible care to others who produce, handle, use, transport or dispose of synthetic organic colorants.

The responsible care program shall fulfil, but not be limited to, the specific obligations described under paragraphs 2-5 below.

2 Product Safety Policy

It is the policy of ETAD members to take all reasonably practicable steps in order to ensure human and environmental safety in the use of the dyestuffs and organic pigments (synthetic organic colorants), manufactured or distributed by them. Members shall comply worldwide with all applicable laws and regulatory requirements dealing with the safety and the environmental impact of synthetic organic colorants.

ETAD recognizes that the legal requirements for hazard communication differ considerably in various regions where organic colorants are marketed. A primary objective of this Code of Ethics is to ensure that such differences do not deprive customers in countries with less stringent requirements of hazard information which is made available to their counterparts in countries with more comprehensive regulations. To achieve a common high standard of hazard communication ETAD members shall:

- Fully inform all customers about all known significant hazards.
- Adopt policies to assure an equivalent level of hazard communication worldwide concerning their product.

3 Products Safety Information

3.1 Safety Data Sheets

Member companies shall ensure that for each of the synthetic organic colorants on their selling range, there is a safety data sheet with an appropriate information content and that it is supplied to all customers.

3.2 Labelling

The EU regulations provide an appropriate basis for classification and labelling of organic colorants.

Where the laws of the country the products are sold to require more stringent or mandate different labelling, the members shall adhere to such required or mandated labelling. In countries with less stringent requirements the labelling shall be in accordance with the EU system or an equivalent consistent with the policy of achieving a uniformly high standard of hazard communication.

3.3 Education and Awareness Programs

ETAD members shall endeavour to inform customers of the safe handling procedures best suited to the products involved.

4 Cessation of manufacture and sale of certain hazardous colorants

The manufacture and sale of certain dyes identified as hazardous by regulation or classification by expert bodies is incompatible with ETAD membership. These dyes are referred to in Annexes A and B.

5 Compliance

Member companies shall comply with the Code of Ethics and shall make every effort to ensure that their subsidiaries do so.

Annex A

Azo dyes or preparations of azo dyes used in consumer applications, which contain, or release by reductive cleavage of azo bonds any of the specified amines*.

Annex B

Individual Dyestuffs*

* The corresponding amines and dyes are listed with the applicable limit values in "Guidance to ETAD Member Companies on the Implementation of the Code of Ethics" which is regularly updated to the current state of scientific knowledge.

Benefits of ETAD Membership

Recognition

Recognised by regulatory authorities, customers, and the public as the authoritative source of information on health, safety, and environmental issues relating to organic colorants.

Representation

Represents interests of members and customers to government authorities, the media, other industries, public interest groups, organised labour, academia, and research/testing/consulting organisations.

Harmonisation

Advocates, where regulations are necessary, a harmonisation of the requirements, so that compliance costs are reduced.

Code of Ethics

Encourages members to adhere worldwide to a high ethical standard and promotes image of a responsible and safety-minded manufacturing industry.

Guidance

Provides guidance to ETAD member companies on interpretation of new regulatory requirements and recommends specific measures to implement the ETAD Code of Ethics.

Education and Training

Develops and publishes education and training materials pertaining to organic colorants, e.g. for safe handling practices, product stewardship, and pollution prevention.

Research and Testing

Cost-sharing of research and testing programs aimed at a better understanding of the health and environmental aspects of dyes and organic pigments.

Information

Responds to inquiries about the colorants' industry, provides information on topical issues and disseminates comments and position papers.

Database

Maintains and makes available to members a computerised database of literature pertaining to the health and environmental aspects of dyes.

ETAD Member Companies

Albion Colours Ltd.
England

ATUL Limited
India

BASF AG
Germany

BEZEMA AG
Switzerland

Cappelle Pigments n.v.
Belgium

Ciba Inc.
Switzerland

Clariant Products (Switzerland) Ltd.
Switzerland

Clariant Corporation*
USA

Colourtex Industries Ltd.
India

Dainichiseika Color & Chemicals Mfg. Co., Ltd.
Japan

DIC Corporation
Japan

Dystar L.P.*
USA

DyStar Textilfarben GmbH & Co. Deutschland KG
Germany

EC Pigments
England

Everlight Chem. Industrial Corp
Taiwan, R.O.C

Everlight U.S.A., Inc.*
USA

Farbchemie Braun KG
Germany

Francolor Pigments SA
France

FUJIFILM Imaging Colorants Ltd.
England

Heubach GmbH
Germany

Hodogaya Chemical Co. Ltd.
Japan

Huntsman Materials & Effects*
USA

Huntsman Materials & Effects
Switzerland

Jay Chemical Industries Ltd.
India

Jiangsu Taifeng Chemical Industrial Co., Ltd.
China

Kemira PPC Germany GmbH
Germany

Kemira Chemicals, Inc.*
USA

Kyung-In Synthetic Corporation
Korea

M. Dohmen GmbH
Germany

Mitsubishi Chemical Corporation
Japan

Nippon Kayaku Co., Ltd.
Japan

Oh Young Ind. Co. Ltd.
Korea

Oriental Giant Dyes & Chemical Ind. Corporation
Taiwan, R.O.C.

Sanyo Color Works Ltd.
Japan

Sensient Colors Inc.*
USA

Setaş Kimya Sanayi A.S.
Turkey

Stahl International bv
Netherlands

Sun Chemical A/S
Denmark

Synthesia, a.s.
Czech Republic

T&T Industries Corporation
Taiwan, R.O.C.

Tennants Textile Colours Ltd.
Northern Ireland

TFL Ledertechnik GmbH & Co. KG
Germany

Thai Ambica Chemicals Co., Ltd.
Thailand

Tri-Tex Co. Inc.*
Canada

Toyo Ink Mfg. Co., Ltd.
Japan

United Color Manufacturing, Inc.*
USA

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