ANNUAL REVIEW 2011

ETAD®

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MISSION STATEMENT

The purposes of the association are the following:

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

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

To encourage harmonization of health and environmental regulations in key geographical areas.

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

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

To enhance the recognition of the commitment of ETAD members to responsible behavior with respect to health and the environment.


75 mm

PREFACE FROM THE PRESIDENT

MR. RAVI KAPOOR (HEUBACH COLOUR PVT. LTD.)

Uncertain times require a focused and flexible approach. 2011 has been an eventful year and the colorant industry saw the smart recovery of the second half of 2010 continuing but, just as all thought that good times were here again, the specter of the European crisis loomed large upon the industry. The global economy was stirred up once again with currencies fluctuating wildly and purchasers becoming skittish towards the end of the year, which pretty much symbolized the mood. What will 2012 bring? The only thing certain is that the uncertainty will continue, and though demand seems to have improved it may be too early to tell.

Mr. Ravi Kapoor
Heubach Colour Pvt. Ltd.

The colorant industry is specially susceptible to these uncertain times, due to the fact that there exists a very close link to other industries which in turn rely on the economic cycle. Color is closely linked to the business mood of the world: if it is black, color does not sell.

There are also issues that rear their head without a particular pattern. For instance, environmental issues in India took center stage in 2011, due to strong court actions with the threat of closure of pigment and dye producers who were not complying with the regulations. This threat has somewhat receded but the uncertainty still prevails and the regulatory authorities are taking a tough position.

In China, colorant manufacturing plants in sensitive locations are being asked to relocate, causing its own set of problems.

The Greenpeace report "Dirty Laundry" raised new questions, asked for fresh commitments and basically challenged the sustenance and growth of the dyes industry even more.

Regulatory issues continue to play a big role, reinforcing the importance of ETAD even more than before. The debate on nanotechnology with regard to safety, toxicology, handling and other issues starts to gather momentum even though we are at the beginning stage. Make no mistake, however, since these are serious issues of near future. ETAD itself is evolving with the times and this is clearly borne out from the introduction of the two new member categories, aimed at increasing the member base as an inclusive strategy and at reaching out to the colorant industry across the globe, especially in India and China. Efforts are also being made to enhance the public perception of ETAD in the relevant press in order to grow and highlight the activities of the association.

What continues to fascinate me, however, is the clear existence of two worlds, which draw closer to each other. One world is where colorants were produced and consumed in a dominant global environment, historically making all the mistakes, rectifying them and reaching the peak of a matured cycle of sustainability and Responsible Care in the manufacture and consumption of colorants. The waste generation problems were first resolved with zero tolerance and "polluter pays" philosophy, and later product safety issues were addressed by a series of regulatory legislations like REACH, which has been the trigger to similar legislations across the globe.

And than there is the other world, which has become not only the largest producing geography of the world but is now on the way to dominating the consumption of these colorants. Here we see a clear lag in the level of maturity and understanding of issues like waste and product safety, just as the-first world did many years ago. Basic economic criteria still dominate the business, and issues like ecology, environment, product safety and toxicology are comparatively in the back seat. However, the fascinating part is how we see the awareness and realization clearly dawning upon this world much faster than one thought, with a growing acknowledgement and adoption of Responsible Care practices by an increasing number of producers.

It is especially gratifying that ETAD gets to play this role of the benign bridge to transport the experience and the knowledge from the first world to the second in a catalytic effort to increase the level of understanding between the two worlds. This brings benefits not only to the industry but also to the regulators in these countries. As always, I would like to mention specially the great work done by the POC, DOC and RAC, which is the core strength of ETAD's activities.

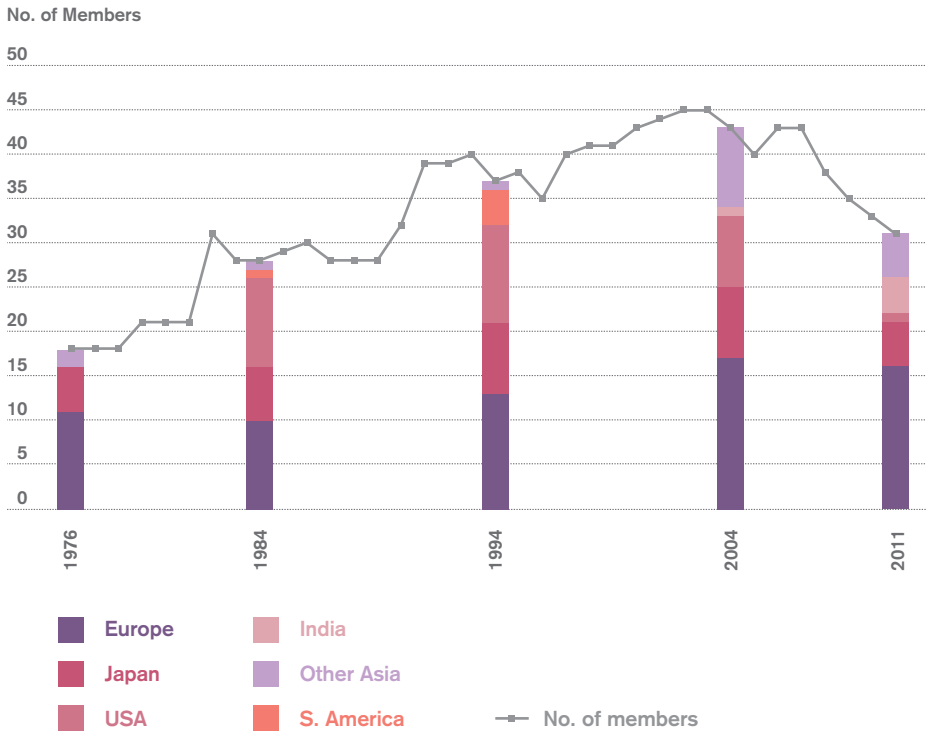
ETAD India was started a few years ago but is growing in leaps and bounds, where we recently had the second ETAD conference, titled "Ecological and Toxicological Aspects of Colorants – Current Implications, India and Global". Never before had the informed members of IOC seen such a level of understanding, from qualified presentations on product safety and waste management issues to the attitude and awareness level of the delegates, who came from across the colorant industry and who shape the philosophy of their respective companies in matters relating to ecology and environmental issues. This event followed the 97th Board meeting of ETAD, where the presence of the Board members ensured that also they were exposed to this new maturity of the other world, and which I believe was most useful for all the participants. This response gives real hope that ETAD's goals and objectives will see success in the second world far earlier than we thought. It was also agreed that a committee drawn from the experts of ETAD members be appointed to look into the waste management related issues.

Uncertain times bring uncertain problems, and our industry can well do without adding to them a lack of sustainable development, which brands the industry as irresponsible, at least in this part of the world.

To conclude I have to mention specially the enthusiastic and proactive participation and support of the entire Board, which allows me to grow on the legacy of our previous presidents, Dr. Davor Bedekovic and, after him, Dr. Ulrich Ott. I continue to enjoy working with Dr Walther Hofherr (ETAD Executive Director), whose enthusiasm is infectious, and who plays a pivotal role in the growth of ETAD. As mentioned earlier the true success of ETAD's activities will come from the meeting of the two worlds, and we are well on the way.

There was no change in the membership composition during 2011.

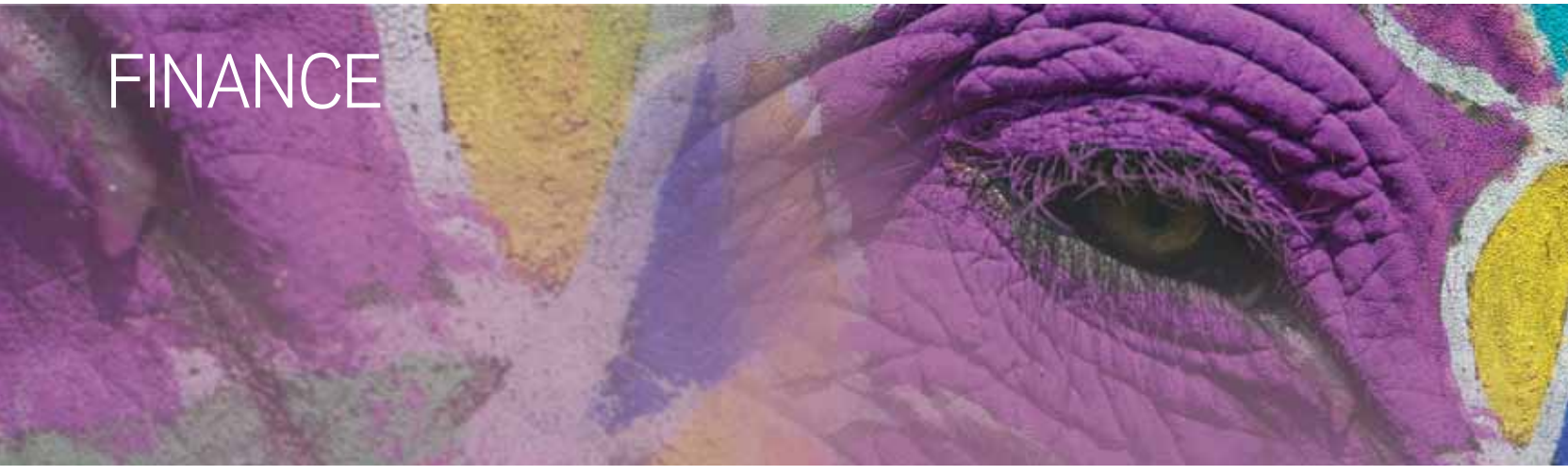
Fig. 1 – Growth and changing regional composition of the ETAD membership



MEMBERSHIP

ETAD is a non-profit association.
The operating expenses are recovered mainly by means of payments by the ETAD members. In 2011, total income was SFr. 999 million compared with total expenditure of SFr. 1'159 million, resulting in a loss of SFr. 160'197.

Fig. 2 – Summary of income / expenditure 1994 - 2011



37TH GENERAL ASSEMBLY

The 37th Ordinary General Assembly of ETAD was held in the NH Amsterdam Center Hotel, Amsterdam, on May 27th, 2011.
Out of the current ETAD membership of 31 companies, 21 were present or represented by proxy. Of the current total vote entitlement of 77 votes, 59 votes were represented at the meeting (77%).

The minutes of the 36th Ordinary General Assembly 2010 and the Annual Report 2010 were approved unanimously. The General Assembly also approved unanimously the report of the Treasurer and chartered accountants (PriceWaterhouseCoopers AG) and the budget for 2011, as presented by Dr. Hochstein. Due to the financial situation it was possible to avoid any increase in membership costs for the fourteenth successive year.

As is customary, the Board proposal for its composition for 2011/2012 was presented to the Assembly. There were no additional nominations in response to the invitation by ETAD Legal Counsel, Dr. Uebersax, and the Board was elected unanimously as follows:

President
Mr. Ravi Kapoor
Heubach Colour Pvt. Ltd.

Vice president
Dr. Clemens Grund
DyStar Colours Distribution GmbH

Treasurer
Dr. Bernd Hochstein
BASF Schweiz AG

Mr. Peter Krummeck
Sun Chemical Pigments International

Dr. Peter Scheibli
Huntsman (Switzerland) GmbH

Dr. Jürgen Schmiedl
BEZEMA AG

Dr. Akio Yoshida
Dainichiseika Color & Chemicals Mfg.

Dr. Rüdiger Walz
Clariant Produkte (Deutschland) GmbH

The General Assembly also voted on the new membership categories of ETAD, "Associate Membership" and "Candidate of ETAD", which had been developed as tools to allow both other important members of the colorants value chain and promising manufacturers to participate to ETAD projects and activities. The introduction of the new categories also entailed corresponding changes in ETAD's By-Laws, which had similarly to be approved by the Assembly. Furthermore, the Assembly was asked to vote on the Amendment of Rules of Code of Ethics Implementation. All three changes were approved unanimously in separate voting sessions.

The President, Dr. Ott, presented to the Assembly the specific goals on which ETAD would particularly focus its attention in 2011. For the regional committees, further effort would be put in revitalisation or development of activities, whereas the new forms of membership would need an implementation program complete of specific application tools and of a strategy for the acquisition of new members.

Dr. Ott also communicated to the general Assembly his leaving both the positions as ETAD President and Board member, due to his new responsibilities at Clariant. By looking back at his time in ETAD, he commented on the great experience of a focussed insight into the balancing of economy and ecology in the current industry. Moreover, he remarked that such a balance keeps becoming more and more important for the colorant business, where concepts like social and environmental responsibility acquire a constantly increasing weight in the decision-making process. Finally, he wished the new President, Mr. Ravi Kapoor, all the best in the just started new position.

In his first speech as new Board President Mr. Kapoor remarked how Product Safety is a special field where differences between "old" and "new" manufacturing areas become particularly evident. Although the recognition of the importance of a responsible approach to production is growing also in extra-European countries, there still is a lack in the corresponding background information and experience. Therefore, it is important for the industry to act very proactively, particularly in order to find a rightly-paced way forward in agreement with the regulatory bodies. ETAD and the Indian Operating Committee have already successfully started to assist Indian authorities in the development of suitable and tailored approaches to specific issues, but further work needs to be done. ETAD gives the possibility to share guidance on both concepts and their practical applications, and this opportunity has to be used. Furthermore, Mr. Kapoor underlined the necessity of increasing the visibility of ETAD in order to strengthen its presence and reputation as an expert for eco/toxicological topics in the field of colorants.

As conclusion of the Assembly, Dr. Hofherr invited to speak Dr. Davor Bedekovic, who, due to his retirement, was leaving the ETAD Board. Dr. Bedekovic had been a long-time member of the Board as well as an ETAD President, and particularly stressed how he had had the opportunity to witness and contribute to the evolution of ETAD from a more conservative association to the actual more flexible one, showing its capacity to adapt to the changes in the industrial world while maintaining its commitment to the Code of Ethics.

DYES OPERATING COMMITTEE (DOC)

The activities of the Dyes Operating Committee continued to center around the implications of changes in legislations and standards worldwide for the dyes product portfolio of ETAD member companies. Additionally, the ever-increasing effect of media and non-governmental organizations on the public perception of the chemical industry also had relevant consequences, often facing manufacturers with the necessity to clarify the scientific reasoning behind requirements.

Legislative changes

Canada released a survey plan for azo/benzidine-based substances in the context of Section 71. ETAD's DOC alerted ETAD NA to remove the benzidine context and was successful: The revision of October 2011 incorporated the objection. This action avoided possible misinterpretation due to the association of azo and benzidine dyes in the same framework, and collaboration with Canadian authorities is going on in order to organize the communication of relevant data. ETAD is considered a reliable and scientifically prepared partner as regards a responsible approach to colorants; this is highly important in the case of such preemptive actions, to remove from the beginning misunderstandings that may affect other institutions.

Europe's REACH passed in first tonnage band for registration. The experiences of the member companies involved in this phase were shared and information on best practices exchanged to reduce the burden. DOC will continue to establish itself as a platform for un-bureaucratic problem solution to common issues with REACH, as this topic is becoming more and more of interest, with the next deadline in 2013 involving more ETAD member companies.
On a related issue, additions to the SVHC substances were monitored. The inclusion of cobalt (II) salts, which are used in the

The need of responding to increasingly important outside factors did ask more than ever for an independent body like ETAD, and the coordination of appropriate actions from the member companies in the field of organic dyes was performed in the Dyes Operating Committee.

manufacture of some dyes, raised concern due to the lack of an adequate method to differentiate between cobalt in different oxidation stages. Hence implications and possible actions are under discussion.

Korea's REACH-like regulation was screened and found to be truly similar to the European, such that it is possible to leverage on the gathered experience there.

The information gathered about **Turkey**'s REACH-like regulation, only available in Turkish language, showed that the usage of the IUCLID system to submit data on substances was not possible. Through ETAD member companies' translation and suggestions for a pragmatic implementation, the impact on the corresponding workload could be diminished.

GHS implementation schedule was continuously followed, particularly as regards details on its practical effect on the product labelling. Next step of the implementation will apply to mixtures, and the coordinated approach among ETAD member companies was aimed to reduce the pressure from other stakeholders. In this respect ETAD is to provide a guidance document such that the companies do respond to inquiries homogenously and clarify the expected changes to their customers.

Institutes and NGOs

The joint project with the **IVDK**, concerning the incidence of textile allergy cases related to textile dyes, was concluded in 2011 after its two-year planned monitoring time.
The conclusion of the report was that no cases of dyes-related skin allergies have been reported, a result which confirmed previous ETAD studies. This result, obtained in collaboration with a recognized independent institute as IVDK, is an important support to ETAD's arguments, particularly when discussing the topic with other stakeholders. Upon request by DOC a first report was issued, and a second version, to be used as an informative reference by ETAD member companies, is in preparation.

In September 2011, the **Greenpeace** Detox action brought the attention of apparel brands to the environmental releases of some of their Chinese dye houses. The retailers decided to publish a roadmap and ETAD was invited to give its input as representative of dyes manufacturers with experience on ecological issues. DOC members discussed together with TEGEWA the implications of the roadmap and the resulting feedback was provided to the retailers through ETAD. Beside the specific comments on items affecting dyes and additives, the two associations also commented on the general applicability of the actions described in the document and suggested implementation ways in line with industries' capabilities. In particular, clear position was taken against the implementation of an inventory, both for its cumbersomeness and for possible CBI-related issues. The final roadmap was published on the websites of the brands and ETAD decided to seize the opportunity to underline how its members are able to offer high quality products well suited to the brands' revised approach to the apparel production.

Nanomaterials

The existing definitions of nanomaterials, which during 2011 had been discussed at the European level, were evaluated with respect to dyes. The finally agreed upon definition, officially published in October, might especially affect dyes. Whereas "nano-scalic properties" do not pose any problem, the "nanoparticles content", as defined in the official definition, may cause some dyes to be included into the nanomaterials. In precendent evaluated definitions, the introduced content-by-weight limit was considered of no concern for dyes. On the contrary, the content-by-number limit introduced in the accepted definition could be critical; however, no precise estimation would be possible until a specific official method is recommended for the determination of the size distribution. DOC will follow the developments of the topic and decide on corresponding actions.

PIGMENTS OPERATING COMMITTEE (POC)

Looking back over the POC activities for 2011 indicates that essentially topics from the preceding years continued to require the attention of pigments manufacturers. There has been, however, one significant change generally applicable to any topic which now confronts us: the improvement in analytical techniques with the consequent introduction by the authorities of lower threshold limits, which impacts on the analytical resources, expertise and instrumentation of the POC members.

Pigments for toys

The new Toys Safety Directive 2009/48/EC came into force July 2009 and EU Member States had to begin applying the new measures from July 2011, except those parts dealing with chemicals where an additional two years was allowed for the implementation. This Directive includes migration limits for 19 "elements" some of which are below 1 ppm. Granted, these limits are for the final toy and not for the pigment product, but POC saw the necessity for responsible manufacturers to give reliable data to their downstream users, which involves the introduction of suitably sensitive analytical methods and instruments.

The chemical requirements necessitated a comprehensive rewriting of many of the EN 71 series of standards, and ETAD continued during 2011 to provide its expertise on pigments-related issues in the corresponding working group created by the CEN. POC together with the ETAD office has invested considerable resources to this update in an attempt to ensure that these new standards can be adapted for our products.

The chlorine issue

Chlorine and chlorine-containing pigments are "hardy perennial" issues, which raise themselves in a number of guises. Already in 2010 POC's activities had been triggered by the revised ROHS directive (2002/95/EC), where, in an early draft, it was considered that any chlorine containing substance could, under poor incineration conditions, generate PCBs. This year it was the presence of trace quantities of inadvertently generated PCBs in organic pigments that needed addressing. The topic is of concern globally and, as regards pigments, had already been the subject of many PCBs determination methods developed by ETAD. In its newest appearance, the issue was specifically brought to the attention of POC by corresponding questions from European competent authorities to ETAD.

In response to this official request of information, ETAD decided to clarify the current status of PCBs in the pigments manufacture and produced a position paper on this topic.

A proactive approach to the issue is necessary for pigments producers to be prepared to similar inquiries from other authorities, and is part of the practical implementation of ETAD's Code of Ethics as an association of responsible manufacturers.

Rosinated pigments

Based on the now publicly available information on the toxicological data submitted within the framework of REACH, POC critically re-evaluated its 1992 project on the sensitization potential of rosin-containing pigment products and concluded that the studies are not robust enough to justify not labelling colophony-containing products. Therefore, in compliance with its responsible care approach, the committee decided that these products should now be labelled. A position paper was finalized and will be placed on the ETAD website.

Food contact

It is interesting to reflect that the regulatory emphasis seems to be moving away from plastics towards inks. In 2010 POC contributed actively (with EuPIA) to the discussion on the Swiss Printing Ink

Ordinance, while in 2011 the German Printing Ink Ordinance has been in the forefront of our concern. But plastics have not been forgotten: Regulation 10/2011/EC on plastic materials and articles that come into contact with food (usually referred to as PIM) came into force and states that colorants are not included in the list of authorized substances; therefore the use of colorants in plastics remains strongly subject to national legislations. Additionally, the Regulation provides no clear definition of what a colorant is; this absence of a precise reference gives rise to interpretation problems both within the pigment manufacturing community as well as when talking to downstream users. ETAD is consequently working on a comprehensive interpretation, in which colorants are seen as products "as put on the market" (similarly as in the German Recommendation IX) and requirements of the existing legislation worldwide are considered referring to this pragmatic approach.

The nano issue

One of our more recent concerns and one with global implications. The European Commission published its definition on October 18th, 2011, focusing on the particles number as central parameter for the classification as nanomaterial. POC remarked that the official declaration of a substance as nanomaterial depends on the existence of a corresponding officially recognized method for the determination of size distribution based on particles number, which is still not available. Several POC members, already involved in *ad-hoc* working groups, are currently addressing this new concern as it affects industry as a whole.

REACH

A review of 2011 would not be complete without a mention of REACH. POC members led consortia, which successfully registered the required Phase 1 substances, and work commenced almost immediately on the formation and leadership of the consortia required for Phase 2 substances.

Analytical activities

The newly developed method for the determination of free primary aromatic amines in pigments was subject to scrutiny by an external independent laboratory. Several imperfections in the method were found and the method modified to overcome the deficiencies. As a final step the results obtained on the same pigment sample from both the new and the old method will be compared.

Additionally, POC confirmed the new ETAD method 229 for the determination of total content of polychlorinated biphenyls in pigments as replacement for the old ones, and suggested that ETAD should officially recommend this method.

Diverse

In an attempt to speed up our response to issues, web meetings have been introduced, where POC members can focus on single urgent topics. Through learning-by-doing, we are still working towards the optimum set up, but the gathered experience has already shown that this mode of communication is a useful addition to our regular face-to-face meetings.

REGULATORY AFFAIRS COMMITTEE (RAC)

The Regulatory Affairs Committee met three times in 2011, with the November meeting being the first to be held at the new ETAD offices in the centre of Basel. At the conclusion of this meeting the RAC Chairmanship was handed over to Dr. Detlev Wormsbächer (Clariant) following the retirement of the outgoing Chairman M. Whitehead (Huntsman). Mr. Emmanuel Fauster replaced Mr. Whitehead as Huntsman representative.
Also at the November meeting Dr. Matthieu Ott (Huntsman) was invited, as a guest speaker, to give a much appreciated presentation on the EU extended safety data sheet, including the key requirements of exposure scenarios and the associated time frame and deadlines.

Between meetings work continued and RAC members maintained a flow of information ensuring awareness of emerging and changing global legislation together with its general impact and interpretation. One of the most important aspects of RAC work is the exchange of ideas and analysis of common problems together with a crucial comparison of progress regarding developing legislation.

GHS and REACH

GHS and REACH continued to be central discussion topics. The country-specific implementation of varying GHS modules presents a challenge to industry because, as a consequence, classifications can vary from country to country. Differing country-specific interpretations and implementation of GHS result in the need for multiple data source information for GHS labels and safety data sheets. Substances and mixtures using different label formats (GHS and old EU) or differing GHS classifications also cause supply chain complications. A common customer query involves the difference between CLP GHS and old EU classifications caused by, e.g., changed cut off limits, especially those for irritant and corrosive substances.
An additional problem is that posed by official national lists of GHS classifications that can differ significantly from that of the EU. Several useful comparison tables indicating differences between GHS implementations have been produced by RAC member companies.

Hazard assessments and classifications in the EU also had to be constantly monitored with regard to information being generated by both labelling submissions on substances by all stakeholders and substance notifications under REACH. This emphasises the need for coordination between ETAD members themselves and the SIEFs and Consortia involved.

A new Annex XV dossier for substances of very high concern under REACH will be prepared for ECHA (European Chemicals Agency). RAC assisted the ETAD Secretariat following requests from ECHA and other agencies for information on substances of concern, e.g., Michler's Ketone and their possible use in colorant synthesis.

Several cobalt salts are now included as substances of very high concern in the Candidate list for Annex XIV of REACH (the Authorisation List). Cobalt salts are used in the manufacture of some organo-metal complex dyes and may be present as impurities in the colorant. RAC advised member companies to consider the possibility of excess complexing agent in the products. As the limit will be 100 ppm it is important that impurity levels can be analysed, preferably by a standardized method. RAC will continue to monitor the progress for its possible impact on the colorant manufacture.

Extended MSDS and exposure scenarios

No RAC member company has yet released an MSDS with an exposure scenario for a colorant formulation, and all members recognised the necessity to co-ordinate and go along the same model lines to ensure consistent information to downstream users. The case of mixtures was particularly discussed as needing detailed clarification: For mixtures it is possible to either produce an exposure scenario for the mixture itself, which can be added as an Annex or

included in the body of the MSDS or, alternatively, the scenarios of the individual hazardous components can be given in the Annex. The downstream user is obliged to check that his use is covered and that the MSDS fits the use. RAC discussed the feasibility of the different approaches and their expected implementation issues as well as best ways to organize internal and external communication.

Guidance to the Code of Ethics

Whilst providing an essential reference in assisting member companies to comply with the Code of Ethics it is also essential that the Guidance Document reflects the latest developments. Some of the ethical restrictions described in the Guidance have now become part of regulations. In addition the significance and technology regarding potential problematic impurities has advanced. The Guidance Document was last updated by RAC members in 2008 but now requires further amendment to include, e.g., the latest EU REACH MSDS requirements, and may also require updating with respect to environmental release to bring it into line with the developing exposure scenarios under REACH. RAC decided to start working on a new revision, which will also incorporate the input of other committees on the topics to be amended.

ETAD recommended metal limits

RAC discussed reports that some dye manufacturers have problems meeting the ETAD recommended limit for barium (100 ppm). The manufacturers suggested a restriction of this limit only to water soluble barium. Since ETAD metal limits are referenced internationally in many regulations and standards, increasing the limit or making an exception for barium sulphate would mean changes to the references and standards, and in addition would not reflect the ETAD Code of Ethics in a favourable light. RAC concluded that the present metal limits should not be changed.

Strategic Approach to International Chemicals Management (SAICM)

RAC supported the ETAD secretariat during strategy discussions pertaining to the Strategic Approach to International Chemicals Management (SAICM). This is a policy framework to promote chemical safety globally. The objective of SAICM is to achieve the management of chemicals throughout their life cycle to minimize adverse impacts on human health and the environment. The goal was adopted by the World Summit on Sustainable Development in 2002 as part of the Johannesburg Plan of Implementation. SAICM has an ambitious scope for chemicals management, including all stakeholders and industry sectors, and it is endorsed at the highest political level with formal recognition by the governing bodies of key intergovernmental organizations. The emphasis is on chemical safety as a sustainable issue. SAICM is endorsed by the Dubai Declaration on International Chemicals Management, and under this umbrella two important projects are:

- CiP (Chemicals in Products)
- GPS (Global Product Strategy, International Council of Chemical Associations)

ETAD was approached by a UNEP representative working on the CiP/GPS Projects who requested available information on the value chain of, e.g., textiles and toys. The group intends to make information on chemicals in articles more transparent. ETAD already attended two meetings of the Working Group, during which it made the group aware of the complexity of gathering data along the supply chain and the dangers associated with positive lists with regard to differing product qualities. As a possible approach to the issue, ETAD proposed a pilot study to first establish a framework for a CiP Information system.

Nanomaterials

On October 18th, 2011 the EU Commission adopted the recommendation on the definition of a nanomaterial, which is expected to strongly affect pigments. Therefore, ETAD is monitoring the practical impact of this definition and continues to propose feasible approaches especially for pigments. Although the topic is well covered by other committees RAC also alerted about the possible capture of disperse and vat dyes under the definitions, since it was reported that authorities in Europe had approached selected printing customers and had inquired about particle size distributions of disperse dyes.

ETAD NORTH AMERICA

ETAD North America continued its operations in Washington, DC to represent the dyes industry to government agencies, liaise with other industry and trade associations, respond to inquiries from the media and public, and coordinate with the global ETAD office in Basel.

Services provided to the North American member companies concentrated on monitoring regulatory and industry developments, networking opportunities, and information exchange concerning the environmental, health and safety aspects of the North American dyes industry.

Regulatory developments in the United States

The Washington office monitored the following regulatory developments in 2011 that were of particular interest to the ETAD N. A. member companies:

- Continuation of the debate among politicians, industry, and the public on possible measures for reform of the Toxic Substances Control Act (TSCA).
- Completion of review by the Occupational Safety and Health Administration (OSHA) of the proposed Globally Harmonized System for Classification and Labeling (GHS). Enactment is expected in 2012 with a phase-in period of several years.
- Amendment by the U.S. Environmental Protection Agency (EPA) of the TSCA Inventory Update Rule to introduce a new rule known as the Chemical Data Reporting (CDR) rule. The CDR, which goes into effect with the next data submission period February 1st – June 30th, 2012, calls for more frequent reporting, limits confidentiality claims, and requires submission of new and updated information on exposures, production/import volumes, manufacturing site-related data, and processing and use information for a larger number of chemicals.
- Removal by EPA of confidentiality claims on more than 150 chemicals contained in industry-submitted health and safety studies. A small number of those appear to be dyes or dye-related chemicals.
- EPA's expansion of the reporting requirements for the Toxics Release Inventory (TRI) and addition of 16 chemicals to the 2011 TRI list, including two possible dye intermediates, 1-amino-2,4-dibromoanthraquinone and o-nitroanisole.
- Publication by EPA of final TSCA Section 4 test rules on the second and third groups of HPV orphan chemicals and proposal of a fourth rule. The first test rule on HPV orphans was published in 2006.

Regulatory developments in Canada

Environment Canada and Health Canada continued the class assessment of aromatic azo- and benzidine-based substances by issuing a draft CEPA Section 71 survey on approximately 375 subject chemicals. ETAD N. A., among other organizations, submitted comments expressing concerns about the number of substances listed, reportable quantities, extent of information and level of detail required in view of previous information submitted already by industry, and potential timeline and data requirement conflicts with REACH.

Just before the end of the year, the final Section 71 survey was published reducing slightly the number of substances covered, separating dyes and pigments, and raising the reporting threshold from 10 to 100 kg. Subsequently, Canadian officials contacted ETAD N. A. seeking input on potential groupings of the class substances and asking for help in obtaining available data.

ANSI voluntary sustainable textiles standard

The standard, known as the Commercial Furnishings Fabric Sustainability Standard, had been approved in 2010 by members of the Joint Committee which had responsibility for developing the standard. The Council of Public Health Consultants affirmed the voting of the Joint Committee and the standard became effective in 2011.

In a separate development, ETAD N. A. became aware of the Sustainable Apparel Coalition, a newly formed group of leading apparel and footwear brands, retailers, manufacturers, NGOs, and the EPA who will be working together to reduce the environmental and social impact of apparel and footwear products sold around the world. ETAD N. A. is monitoring developments.

National Textile Association (NTA) collaboration

ETAD N. A.'s collaboration with NTA continued, albeit at a slower pace, in an effort to secure funding for an electronic format of the Voluntary Product Environmental Profile (VPEP) that would link to customer and supplier databases.

ETAD NORTH AMERICA (CONTINUED)

EPA Emission Scenario Documents

EPA asked ETAD N. A. for help in preparing Emission Scenario Documents on textile dyeing. ETAD N. A. provided input based on information supplied by some ETAD N. A. member companies and from a report obtained from the Basel office on a recent textile dyes exposure study in Europe that was developed within the context of a corresponding study with TEGEWA. ETAD N. A. received a draft of the Emission Scenario Document but, upon initial review, had no major comments.

Residual dyes in containers

A number of National Textile Association member mills have agreed to cooperate with ETAD N. A. in the development of baseline data on residual levels of dyes remaining in empty drums. ETAD N. A. is in the process of collecting samples at the participating mills. Also, EPA officials from the National Program Chemicals Division have offered to help with study design and evaluation.

Chemical testing

The Washington office continued to monitor developments in various testing programs that could impact the ETAD N. A. member companies. A final test rule for the second group of High Production Volume (HPV) chemicals, including the dye Leuco Sulfur Black 1, was published in early 2011. In October 2011, a final rule was published on the third group of HPV chemicals which included some of interest to ETAD N. A. members. At the same time a proposed fourth HPV test rule was published and was of concern to ETAD N. A. because of the possible precedent-setting provision for using the Significant New Use Rule (SNUR) under TSCA Section 5 for obtaining test data where insufficient exposure-based justification existed.

No further developments impacting ETAD N. A. member companies occurred in EPA's endocrine disruptor screening program.

As in the agreed strategy for IOC activities, the push during the first half of the year was on waste management issues and on the expansion of the role of IOC in the areas of ecology and environment protection. This was to build up on the momentum created by the Round Table Conference on waste management titled "Responsible Waste Management for Responsible Growth" in 2010, a symposium very well received by the Government of Gujarat, which even funded it under the state Government program for clean manufacturing in the chemical industry.

Collaboration with BIS

Another important activity that bore fruit was the sustained and intensive dialogue with the Bureau of Indian Standards (BIS), which IOC continued successfully in the year 2011. The Bureau of Indian Standards falls under the Ministry of Consumer Affairs Food and Public Distribution and is the single authority to determine the standards and test methods for all industrial and chemical products. This includes all certification processes like the Indian standards, which are similar to DIN standards. The BIS is evolving and moving to an increased level of product safety awareness, which comes about from a better understanding of the topic and from the global spread of information on toxicology and product safety related issues. This is clearly a period of transition for the regulator as well as industry, and one of IOC's remits is to assist regulators in the alignement of their knowledge base to the flow of new information. For this specific activity, IOC thankfully accepted the help and assistance received specially from Dr. Simon Lawrence and other POC members, who provided other key data and information. This common effort allowed IOC members to participate actively in responding to the review of the BIS standards relating to plastics for food contact. In particular, they attended the plastic subcommittee, held in BIS New Delhi on June, 27th / 28th, specifically to review standards as per IS9833 - pertaining to pigment and colorants for use in plastics in contact with food stuff, pharmaceuticals and drinking water. This issue was discussed and an amended draft was prepared for further approval. Additionally, IOC members participated in the review of BIS standards for specification of organic pigment for paints (IS 3574 – part 1) - Azo pigments. Key data was provided and further recommendations were made for inclusion in the standard, as, e.g., an upper limit of 100 ppm for lead. Furthermore, C.I. Pigment Red 2 and C.I. Pigment Red 112 were recommended for inclusion in the list of pigments approved for use in paints. The contribution of IOC was much appreciated by Mr. K. K. Paul (BIS Director, Chemical), and BIS authorities asked IOC to participate actively in the review meetings for determining standards pertaining to the paint industry.
As regards the definition of agreed test methods for the testing of pH in aqueous pigment suspensions, IOC recommended to adopt ISO 787 – 9 – 1995, as part of a

INDIAN OPERATING COMMITTEE (IOC)

Mr. Ravi Kapoor, President of ETAD and chair of IOC, held a series of presentations during 2011, among others at the Indiachem trade fair in Ahmedabad. During all these presentations, the focus points were corporate governance and growth in chemical industry in a responsible manner. Mr. Kapoor was also part of the task force instituted by the Government of India on the growth of the chemical industry up to 2020. Keeping in mind the huge growth forecasted for the industry it was stressed that this growth would not be possible without a sustainable model of development.

general effort to align test methods to a recognized standard.
One very positive aspect of IOC collaboration with the BIS has been the participation and cooperation of all IOC member companies, thereby ensuring a proper representation across the industry. This also provides the necessary encouragement to continue IOC's work with the regulators, and is especially heartening given the fact that, in earlier years, the participation among the companies in India had been quite poor.

Presentation of the CiP program

During their Round Table Symposium in 2010, IOC and the Indian Chemical Council (ICC) had entered into a Memorandum of Understanding for co-operating in areas of common interests relating to the colorant and chemical industry. Based on this, ETAD took a first step in October 2011 by organizing a presentation to a high-level delegation (including both Indian Chemical Council and ETAD members) in the conference hall of ICC in Mumbai. The presentation, held by Mr. Kevin Munn from the United Nations Environment Program (UNEP), focused on chemicals in products (CiP), and IOC agreed with Mr. Munn that this would be the first foray in pushing the concept of CiP in India.

Waste management

During October 2011, IOC was active at Indiachem, where Mr. Kapoor made a presentation on waste management related issues for the colorant industry. He pointed out the urgent need of Responsible Care practices for the sustainability of colorant industries in Gujarat and in India. He further stressed the role that could be played by ETAD in helping the colorant industry to develop the right attitude and correct methodology to resolve the issues relating to waste management. Mr. M. Sahu (IAS, Principal Secretary, Industries & Mines Department of Government of Gujarat), chairman of the session, was very appreciative of the presentation and stated that the Government of Gujarat would welcome collaboration with the ICC and ETAD towards sustainable growth of the chemical and colorant industry.

During the meeting of IOC held in December 2011 the need to form an Environment and Ecology sub-committee to coordinate and exchange information in matters relating to waste management and reduction was discussed as this would be a pressing issue for IOC. It was decided that a sub-committee would be formed consisting of some of the board members, who would meet and discuss issues relating to pigment and dyestuff regulatory status in India and how they can further interact with Government, Regulatory Authorities and other downstream stakeholders. A possible list of speakers for a corresponding seminar to be organized in January 2012 was frozen.

Diverse

As agreed during the last board meeting it was confirmed that the 97th Board Meeting would be held in India in Mumbai and that IOC would subsequently organize a seminar for the Indian colorant industry. The seminar, titled "Ecological and Toxicological Aspects of Colourants- Current Implications – India and Global" will be held on January 24th, 2012 after the ETAD Board Meeting.
Furthermore, IOC decided to push for new members also considering candidates who could apply for the two new categories that were introduced during ETAD General Assemby in 2011.

JAPANESE OPERATING COMMITTEE (JOC)

First of all, the members of JOC would like to express their sincere thanks for the special support and sympathy received from ETAD members and people all over the world toward Japanese inhabitants who are confronting the Tohoku Earthquake Disaster. Thanks to those supporters, Japan can go for the reconstruction from such calamity.

JOC has entered the second year after its re-activation in 2010. We would like to report the key activities of JOC in 2011 and highlight the objectives of 2012.

JOC in 2011

In addition to the regular exchange of information, JOC also had a joint meeting with Dr. W. Hofherr in September in Japan, where the latest ETAD activities as well as Japanese regulatory topics were communicated and discussed in detail. In July, all JOC members received account details to access ETAD's e-Room. This has facilitated communication among them about updated global issues.
A key activity of JOC remained the unofficial translation of crucial legislative text and their communication "in real time" to the Basel office.
Major discussion topics during the year included impurity profiles in organic pigments, nano issues and the amended CSCL.

Dealing with issues on impurities in pigments

For their activities concerning incidental impurities in some organic pigments, JOC decided to associate with JDICA (Japan Dyestuff and Industrial Chemicals Association). A working group has been created in JDICA and all the member companies of JOC have taken part in it with the goal of coordinating their work and communicating about upcoming issues. The activity is now in progress and regular updates are given from JOC to the ETAD office.

Nanomaterials regulatory situation

In Japan there is no law which directly regulates nanomaterials. However each company is taking voluntary measures concerning workers' safety and environmental protection according to the guideline issued by the Ministry of Health, Labour and Welfare.
The provisional nanomaterial definition in Japan has similarities to the international ISO Specification, whereas the main focus of Japanese authorities has been on the characterization of nanomaterials.
In 2011 the Ministry of Economy, Trade and Industry (METI) established the "Committee on Safety Management for Nanomaterials" on the basis of the results obtained from the project "Research and Development of Nanoparticle Characterization Methods" commissioned by the New Energy and Industrial Technology Development Organization (NEDO) and the latest scientific knowledge. Specifically, this committee puts the focus on risks caused by nanomaterials (especially in view of exposure to nanomaterials in products) and studies appropriate management procedures for nanomaterials considering the actual usage and life cycles.
JOC has followed closely the activities on nanoparticles and provided ETAD with the results and conclusions of the studies. As in Europe, authorities have given the main attention to substances considered of

particular concern (fullerene, carbon nanotubes, TiO_2) and the accompanying documents are a very useful reference, in particular as regards the development of methods for the determination of particle size.

Chemical Substance Control Law

The revised Chemical Substances Control Law (CSCL) has been enforced in a two-phase process with the first phase starting on April 1, 2010 and the second phase starting on April 1, 2011.

As foreseen by the implementation plan, along with the rescission of Type II and III Monitoring Chemical Substances (MCS), the law started considering the following categories of substances:

- General Chemical Substance (GCS)
- Monitoring Chemical Substance, replacing the former Type I MCS
- Priority Assessment Chemical Substance (PACS)
- Class I and Class II Specified Chemical Substance

Screening assessment by the authorities on Type II and III MCS identified 88 substances as PACS, requiring immediate efforts for further scrutiny. The list of PACS is not static: Based on hazard information available to the authorities and the volume/use information annually reported by industry, the authorities will repeat continuously a screening assessment to update the PACS list once every year, by adding those newly selected and delisting those found to be of low risk potential.

Importers and manufacturers are required to report to the authorities annualized quantities of PACS and GCS exceeding the threshold of 1 ton/yr or more per legal entity. Exemptions from the mandatory reporting include PACS present as impurity below 1 wt% in a mixture, GCS below 10 wt% in a mixture, and about 1500 substances of low risk published by the authorities.

Subsequent risk assessment on PACS consists of two phases. In the initial phase, the authorities pursue a three-step approach, with Step 1 involving exposure and hazard information from industry for prioritization, Step 2 involving more details analysis for risk characterization, and Step 3 involving evaluation on release information to be collected from downstream users. All three steps are not always necessary to evaluate PACS. Those chemicals in the PACS list identified to be of low risk potential are re-categorized into GCS, subject to the screening assessment again for nominating PACS.
Importers and manufacturers of PACS are required to conduct long-term toxicity studies if step 3 of the initial phase identifies sufficient evidence of potential risks of the PACS. Consequently, the secondary phase assessment is conducted only on PACS of which long-term toxicity data are collected. If determined at the secondary phase to have unreasonable risk to human and environment, PACS are regulated as Class II Specified Chemical Substances, of which import, production and use fall under strict control.

Legal entities distributing MCS and PACS are obligated to make utmost efforts to inform recipients in supply chain that distributed chemicals are regulated as MCS or PACS.

JOC activities plan for 2012

JOC activities will continue to focus on the following three issues:

- Dealing with impurities in pigments
- Monitoring of nanomaterials regulatory situation in Japan and evaluation of its impact on pigments
- Dealing with the new requirements in the revised Chemical Substance Control Law


PENSION

INFORMATION AND EXTERNAL ACTIVITIES

Publications

ETAD Position on the presence of traces of PCBs in some organic pigments. (January 2011)

ETAD N. A. Comments on the Draft Section 71 Survey, Notice of Intent for the Class Assessment of Aromatic Azo- and Benzidine-Based Substances. Submitted to Environment Canada. (August 2011)

Final report on the ETAD/IVDK project on contact allergy to textile dyes. (September 2011)

ETAD Method 229 for the determination of total content of polychlorinated biphenyls in pigments (including mono- and di-chlorobiphenyls) by dissolution, cleanup and GC/MS. (December 2011)

Press releases

Short communication on ETAD membership changes, *Textile World,* July 2011

"ETAD Broadens Membership", *International Dyer*, September 2011

"New Board, new tasks", *European Coatings Journal*, November 2011

Presentations

"Information Exchange on PCBs in Organic Pigments" (presented to the Climate and Pollution Agency Norway, Oslo, August 2011)

"Organic pigments and current food contact regulations" (presented at the FCA General Assembly, Bordeaux, September 2011)

"Food Contact Packaging with special reference to Packaging Inks" (presented at the Eurocolour meeting, Brussels, October 2011)

External activities

During 2011, ETAD continued or started its activities in different projects with external groups and associations. The most relevant collaborations included:

- Environment Canada and Health Canada, which ETAD is assisting in the class assessment of aromatic azo-substances, as regards azo-dyes;
- the United Nations Environment Programme (UNEP), where ETAD is participating to the project Chemicals in Products (CiP);
- the CEN Technical Committee 52 / Working Group 5, working on the revision of Toys Standards series EN 71, where ETAD is providing input on finger paints, heavy metal limits and analytical methods;
- the Norwegian Climate and Pollution Agency, which consulted ETAD as regards impurities in pigments used in paints;
- national authorities as well as national / international industry associations involved in the definition, regulation and characterization of nanomaterials;
- the Bureau of Indian Standards (BIS), to which ETAD provided updated information on current food contact legislation, organic pigment for paints and colorant-specific analytical methods, for the revision of the corresponding national standards;
- the Japan Dyestuff and Industrial Chemical Association (JDICA), which, *via* JOC, regularly updates ETAD on regulations and emerging issues in Japan.

Further information can be found in the single committees reports.

BOARD MEMBERS AND ETAD STAFF*

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Legal Counsel of ETAD North America
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Legal Counsel of ETAD International

* This lists give composition as in March 2012

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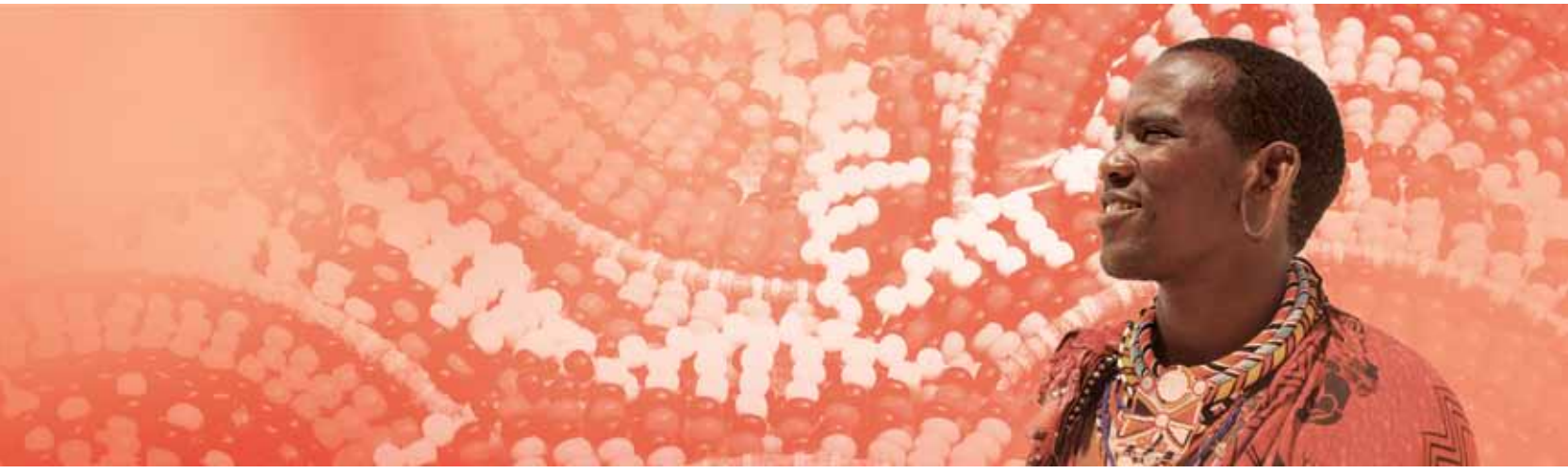
* These lists give membership as in March 2012



CODE OF ETHICS

Preamble

The aim of ETAD is to minimize 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; and
- 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 to 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

ATUL Limited
India

BASF SE
Germany

BEZEMA AG
Switzerland

Brenntag Colours Ltd.
UK

Cappelle Pigments n.v.
Belgium

Clariant International AG
Switzerland

Colourtex Industries Ltd.
India

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

DIC Corporation
Japan

DyStar Colours Distribution GmbH
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Everlight Chem. Industrial Corp.
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FUJIFILM Imaging Colorants Ltd.
UK

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Huntsman, Materials & Effects
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Jay Chemical Industries Ltd.
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