IAOIA

INTERNATIONAL ANTIMONY OXIDE INDUSTRY ASSOCIATION

Volume 1, Issue 1 May 2002

IAOIA Mission

The Mission of the International Antimony Oxide Industry Association is to serve the common interests of antimony producers, users and other stake holders world-wide concerning the environmental, health and safety regulatory affairs concerning antimony substances and their uses. The activities of the IAOIA will be determined by its members, and may include the conducting studies, dissemination of information pertaining to the safety and benefits of antimony substances, and the development of scientific information for the submission to governmental agencies.

The Organization History

The Antimony Oxide Industry Association, AOIA was formed in 1978 to meet the requirements of the antimony oxide industry in the USA. At that time the highest priorities was the response to the USA EPA concern for carcinogen studies. In 1983 the AOIA commissioned, an inhalation study that was peer reviewed and indicated tha cancerous tumors were not formed in the lungs of rats in the study. Over the years the AOIA has submitted information and comments to the US government on man issues.

1996 EPA visit to all production sites for MACT review. 1997comments to California Air Resources Board related to their Toxic Air Contaminant Identification list. 2001 comments to the EPA's proposed Paint Production Waste Listing Rule

In 2000 the IAOIA was formed with European companies and a Japanese industry group. The focus on the belief that regulations and perceptions accepted in any country will eventually affect our industry generally.

The AOIA and IAOIA have been merged into one organization and a category for associate members has been added to meet the demand for other stakeholders to become involved. These are stakeholders such as producers of related products, distributors and consumers that choose to actively participate in issues surrounding the industry. The associate membership is a way to be involved and contribute to the support of our industries. Associate member fees are significantly less than full members but their support assists in funding the research projects.

Regulatory Issues with Global Impact

Public awareness concerning post-consumer environmental persistence and human health impact of flame retardant use in consumer products is on the increase. In the European Community (EC), United States, and Japan, flame retardants continue to receive high profile evaluation and close scrutiny regarding potential environmental and human health impact. Several flame retardants are currently undergoing risk assessment in the EU. The observation has been that all too often intrinsic hazards rather than real risks or benefits are the basis for legislation. Consequently, the precautionary principle is applied and overly conservative estimates of exposure are used when data are not readily available. Regulatory pressure on Antimony Trioxide (ATO) seems to be on the increase especially in the European Community both directly and indirectly (through BFRs). Historical experience has shown that European issues are often transferred to the U.S. and Asia.

Antimony Trioxide is one of many flame retardant chemicals slated for a risk assessment under the Existing Substances Regulation (793/93/EEC). It was published on the 4th priority list in October 2000. This risk assessment is compiled of a full health and environmental hazard review, which includes an exposure assessment. Possible outcomes include: 1) further info is needed; 2) no need for further info/testing or risk reduction beyond these already applied 3) risk reduction is needed (which may lead to a complete ban). Currently, the International Antimony Oxide Industry Association (IAOIA) is conducting several environmental and mammalian toxicology studies to fill in data gaps identified through negotiations with the rapporteur, Sweden. The rapporteur expects to have a draft of the risk assessment in the fall of 2002, the document may be placed on the European Chemicals Bureau (ECB) Technical Agenda as early as March 2003. IAOIA members will continue to monitor these activities closely and maintain good communications with the rapporteur.

Also within the EC, the Classification and Labeling Working Group – Environment has proposed mandatory R-phrase

classification (R51-53, N) based on its physical classification as an insoluble metal compound. The IAOIA has conducted ecotoxicity studies to demonstrate that the R-phrase 51 does not apply and is currently sponsoring a chronic transformation/dissolution study to determine if the R53 is applicable. Classification has been deferred until the conclusions of the risk assessment are available.

In the U.S., the National Academy of Science (NAS) published a report on The Toxicology of Flame Retardant Chemicals (2000). This report was sponsored by the Consumer Product Safety Commission (CPSC) and included reviews of potential human health risks from exposure to textiles treated with antimony trioxide to reduce the risk of ignition and consequent residential fire deaths. It was concluded that ATO could pose human health risks due to inhalation of respirable airborne particles. This exposure assessment used highly conservative assumptions with regard to amount of backcoating that could become airborne, and the duration and atmospheric conditions of exposure. When CPSC scientists reviewed this assessment using less conservative exposure parameters, it was concluded that ATO would not pose a potential health risk of lung lesions to consumers. Both the NAS and the CPSC have concluded that there could be a potential cancer health risk to consumers as the calculated Hazard Index is currently > 1. Furthermore, they have also stated that more data would be needed concerning the potential for airborne particles to be released from textile backcoatings to make a precise conclusion. The IAOIA has committed the necessary resources to complete such an evaluation, which is currently in the preliminary phase of investigation. This information could be important for any small open flame standard that might be promulgated nationwide, such as the adoption of the California Technical Bulletin 117 or other standards for home furnishings materials.

Because most formulations of ATO contain lead as an impurity at concentrations of about 0.1 – 0.2%, legislation directed at banning lead and heavy metals could have a potential impact on the sale and use of ATO. Examples of such proposed bans include the Danish Lead Ban which is directed at products containing lead forms at more than 100 ppm. Raw materials and semi-finished products are exempted, therefore, ATO must fall under the definition of raw materials in order to comply. Other types of legislation include the End-of-Life Vehicles Directive 2000/53/EEC which mandates that vehicles are not allowed to contain heavy metals such as lead, cadmium, mercury, and hexavalent chromium. No concentration limits for impurities have been implemented so far, however, a maximum concentration of 0.1% has been proposed as an impurity in metal products. This Directive is scheduled to go into effect July 1, 2003. A similar directive for electronics is the proposed EU WEEE/ROHS Directive. The greater impact of this type of legislation could be a shift away from brominated flame retardants and products with lead impurities.

The World Health Organization (WHO) is preparing a drinking water standard for ATO. This standard is very important in Europe and in Asia and IAOIA has been monitoring this activity closely. The report should be published for public comment soon.

Regulatory pressures on ATO are on the increase, especially within the European Community. Closing the environmental and human health data gaps is essential to the survival of ATO and associated products. Communication with regulators and stakeholders is essential to the development of an accurate consumer product risk profile that demonstrates the safety of ATO

The IAOIA Members

In the USA / Europe organization:
Campine
Great Lakes Chemical Company
Laurel Industries, Inc. (OxyChem)
Lucette
Sica

In the Japan Mining Industry Association:
Nihon Seiko Co., Ltd.
Mikuni Smelting & Refining Co.
Nissan Chemical Industry, Ltd.
Sumitomo Metal Mining Co., Ltd.
Tohko Industrial Corp.

The IAOIA Associate Members

Albemarle Corporation
Dead Sea Bromine Group (DSBG)
Durr Marketing Associates, Inc.

These are the responsible companies that are working very hard to ensure the antimony products are protected in the market place through proper response to all our government agencies and development and distribution of reliable data. These organization are sharing the costs, both financial and through employee time. By choosing to conduct your business with one of these companies you are supporting our industry.
If you are a producer, distributor or consumer of antimony products and would like to contribute to these efforts, contact an IAOIA, JMIA office or one of our member companies.

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