The International Paint and Printing Ink Council (IPPIC)

Industry Perspectives on the Elimination of Lead Paint

Marie Clarke
Counsel
International Paint and Painting Ink Council, Inc. (IPPIC)
September 2014
Overview

• Introduction to IPPIC
• IPPIC Commitment to GAELP
• Industry Conformance with Existing Legal Requirements
• Elements of Lead Hazard Controls
• Examples of Current Industry Collaboration with Governments

NOTE: Follow-up Session from UNEP and IPPIC with an Industry Case Study
Introduction to IPPIC

- A global council of national trade associations representing the paint and printing ink industries

- Established in 1992
  - Networking
  - Information sharing
  - Policy development at national/international level

- Formal Consultative Status with the UN (ECOSOC) in 2003
“IPPIC Network”
Secretariat (ACA)

The Americas
- ACA (USA)*
- ANAFAPYT (Mexico)*
- CPCA (Canada)*
- ABRAFATI (Brazil)*

Latin American Fed.
ABRAFATI (Brazil)*
ANAFAPYT (Mexico)*
Argentina
Uruguay
(Colombia)
(Venezuela)
(Ecuador)
(Peru)

Europe
- CEPE (EU)*
- FIPEC (France)*
- VdL (Germany)*
- BCF (UK)*
- IVP (Belgium)
- DFL (Denmark)
- PUPVPIM (Greece)
- ASEFAPI (Spain)
- AVISA (Italy)
- GFCV (Luxemburg)
- VVVF (Netherlands)
- MLF (Norway)
- FCIO (Austria)
- APFTV (Portugal)
- VSLF (Switzerland)
- VTY/PVY (Finland)
- SVEFF (Sweden)
- MAFEOSZ (Hungary)

Africa/Asia/Pacific
- APMF (Australia)*
- CNCIA (China)*
- IPA (India)*
- JPMA (Japan)*
- SAPMA (South Africa)*
- APIC (Asia)
- TPMA (Thailand)
- SLPMA (Sri Lanka)
- SPMA (Singapore)
- PPMA (Pakistan)
- IPMA (Indonesia)
- MPMA (Malaysia)
- KPMA (Korea)
- PAPM (Philippines)

* = Active IPPIC Member
Introduction to IPPIC

• Issue Areas
  – Global Alliance to Eliminate Lead Paint (GAELP)
  – Sustainability
  – Transport of Dangerous Goods (TDG)
  – Globally Harmonized System of Labelling (GHS)
  – Nanotechnology
  – International Agency on the Research of Cancer (IARC)
  – Marine Coatings Issues

• Biannual Coatings Summit and Global Marine Coatings Forum

• Sponsors the Global Paint and Coatings Industry Market Analysis
IPPIC Resolution on Restricting Use of Lead in Paint (2008)

“IPPIC supports the long-standing effectiveness of lead-use restrictions that are already in place in certain jurisdictions and recommends their widespread adoption by authorities not currently regulating the use of lead in paint and printing ink. Such restrictions may be accomplished through specific legislation or regulation, formal voluntary agreements, or by other means that ensure widespread and verifiable compliance.”
IPPIC’s Commitment to GAELP

- Increase industry understanding of the potential human health and environmental risks associated with continued use of lead in paint

- Reinforce the technical reformulation requirements that:
  - Allow for compliance with (applicable) lead use restrictions in paint
  - Provide for alternative products that meet performance requirements

- Establish a “level playing field” for manufacturers by actively engaging governments (and their associated regulatory agencies or official agents) in the development and enforcement of lead use restrictions
Industry Conformance with Existing Legal Requirements

• Historical evolution of lead restrictions has tracked with “awareness” of the problem:
  – Ingestion of “paint chips” by children
    • Lead dust from “deferred maintenance”
  – Worker exposure to lead
    • Occupational safety and health considerations
  – Environmental impacts
    • Air pollution control (i.e. structural steel painting)
    • Waste management
Where lead in decorative paint is restricted (GREEN), unrestricted (RED) and subject to voluntary action (YELLOW)  

SOURCE: US EPA
DECORATIVE PAINTS: Conformance with Existing Legal Requirements

• From IPPIC Global Market Analysis - percentage of global decorative paint production (annual 20 billion litres)

  – Europe produces 31% of the global total
  – North America produces 23% of the global total
  – Asia Pacific produces 30% of the global total
    • 20% of this production in Asia Pacific is in “unregulated” countries
  – Latin America produces 9% of the global total
    • 33% of this production is in “unregulated” countries
  – Rest of the World (ROW) produces 7%
    • 28% of this production is in “unregulated” countries

– TOTAL Unregulated – 11% of global production of decorative paints is in “unregulated” countries
DECORATIVE PAINTS: Conformance with Existing Legal Requirements

• 11% of the global production of decorative paints is done in countries where lead use is “unregulated.” This does not mean that all of this production contains lead:
  – More than half of this production (85% on average globally) is “waterborne” paint, with no intentionally added lead content
  – A much smaller percentage of this production (15% on average globally) is “oil paint”, where lead may continue to be used
    • NOTE: IPEN studies indicate that roughly 2/3 of oil paints sampled contained lead above 600 ppm, however testing was acknowledged as not being a “market sample”

• Consequently it is difficult to precisely estimate the volume of lead-containing decorative paint that continues to be manufactured and used.
  – Globally most (estimated at more than 95%) decorative paint production does not contain lead
  – Regionally, and especially in “unregulated” areas, lead use in paint is more common, but in total likely comprises less than 3% of the global production

• Bottom Line – Industry supports restrictions on lead in decorative paints, and by and large current production conforms to established restrictions
Elements of Lead Hazard Control

• Establish controls based on risk to vulnerable populations
  – Children
  – Workers

• Understand critical industrial coatings performance requirements (i.e. corrosion protection)

• Evaluate the adequacy of the existing lead “safety net”

• Focus on “intentionally added” lead, and acknowledge residual contamination concerns
  – Soil derived materials often have some background level of lead which cannot be eliminated and “unintentionally” added
  – Globally, there are different quantitative limits for residual lead contamination in paint
  – Local (i.e. national) standards should continue to apply
    • But residual limits should be kept as low as possible
Industry Collaboration with Governments

- Mexico
- Philippines
- Vietnam
- Thailand
- Japan
- Taiwan
- South Korea
- New Zealand
Mexico

• **1990**: Mexico switched to lead-free gasoline

• **1994**: Mexico joined the OECD and this required compliance with its hazardous chemical management guidelines. This resulted in the publication of several compulsory Mexican Official Standards (Normas Oficiales Mexicanas) including:
  
  – NOM-004-SSA1-1993 banning the use of 3 lead compounds: basic lead carbonate, lead oxide, and red lead oxide in consumer products.
    
    • This standard effectively allowed organic lead driers and lead based pigments to continue to be used in the paint industry.


  – NOM-003-SSA1-1993, requiring special labelling for paints containing lead compounds.

• **2006**: The labelling standard was updated in 2006 (NOM-003-SSA1-2006) to define a lead-free paint as containing less than 600 ppm total lead content. This content is calculated from the raw material data, not verified experimentally.
Mexico

- **2010**: IPEN published a study showing high lead content in Mexican decorative enamels.
- ANAFAPYT voiced concerns of the industry and requests the Ministry of Health update NOM-004-SSA1-1993 (a limited ban) to effectively include all lead compounds.

- **2012**: Ministry of Health updates lead limits for toys and school supplies as NOM-252-SSA1-2012 to be consistent with EN 71-31, ASTM- F693 and Directive 88/378/EC.

- **2013**: Ministry of Health consents to update NOM-004-SSA1-1993 to ban the use of all lead compounds in paints and consumer products.
- ANAFAPYT participates actively in drafting the language and advising the ministry on preparing the economic impact assessment.

- **2014**: New NOM is published as NOM-004-SSA1-2013. This compulsory standard bans the use of all lead compounds in paint and invokes the maximum allowable limits, verification mechanisms and labelling requirements of the labelling standard currently in force.
Philippines

- December 2013 – The Philippine Government thru the Department of Environment & Natural Resources issued the administrative order no. 2013-24 to prohibit the use of lead and lead compounds in the ff. applications:
  - Packaging for food and drinks
  - Fuel additives
  - Water pipes
  - Toys
  - School supplies
  - Cosmetics
  - Paints (threshold limit of 90 ppm)

Use of Lead in paints shall be allowed for a transition period of:
  - 3 years – Architectural Coatings
  - 6 years – Industrial Coatings

While in the transition period, manufacturers have to abide to the proper labelling requirements in accordance with the Global Harmonized System (GHS) of Labelling to give enough precautionary warning to the consumer.

Currently, Lead and lead compounds are under the Priority Chemical List of DENR which requires corresponding permits.

PAPM and Ecowaste Coalition/IPEN are also collaborating on a Certification Program whereby manufacturers could get a certification and a mark in their packaging that it is lead-safe. The scope is also 90 ppm limit for lead and lead compounds. We are reviewing the final draft of this program.
Vietnam

- Vietnam Paint and Printing Ink Association (VPIA)
- Issuing new limit of lead content in children’s toys
- Participated in GAELP’s International Lead Poisoning Prevention Awareness Week 2013

Thailand

- Thai Paint Manufacturers Association (TPMA)
- Participated in “Leaded Paints Control”
Japan

• Japanese Paint Manufacturers Association (JPMA)
• 33 JPMA members stopped use of “Lead contained Paint” in 2012; more than 22 members declared the elimination of lead contained paints.
• As a result, the consumption of Lead in paint has been reduced to 1,001 tonnes in 2013 which shows (approx. 20% less than 2011)
• JPMA is working to develop a new coating system for these listed substrates and set up a Japanese Industrial Standard (JIS):
  – Lead Sub-Oxide Anti-Corrosive Paint (JIS K 5623) & Lead Cyanamid Anti-Corrosive Paint (JIS K 5625)
    • Eliminated from the market and deleted from the JIS Standard
  – Calcium Metaplumbate Anti-Corrosive Paint (JIS K 5629)
    • Drying properties and the cost could not meet the requirements of the users such as metal frames, shutters, door manufacturers. The paint formulation should be reviewed and reformulated as soon as possible, including testing to ensure satisfactory performance.
    • Although respective usage of Lead may be minimal, JPMA will make an additional effort to develop our technology within 3 to 5 years (target).
Decrease of Lead in Paints

1. This data is reported based on feedback from 18 members (out of top 20).
2. This data shows total handling volume of Lead (Pb) per annum since 1992.

Transition of Lead Compound in Paints

<table>
<thead>
<tr>
<th>Year</th>
<th>1992</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014 (Target)</th>
<th>2015 (Target)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primer/AC contained Pb (ton)</td>
<td>8902</td>
<td>1567</td>
<td>1389</td>
<td>930</td>
<td>785</td>
<td>715</td>
<td>676</td>
<td>559</td>
<td>441</td>
<td>360</td>
</tr>
<tr>
<td>Pb contained additives/agents (ton)</td>
<td>5720</td>
<td>1270</td>
<td>943</td>
<td>632</td>
<td>537</td>
<td>495</td>
<td>446</td>
<td>417</td>
<td>382</td>
<td>345</td>
</tr>
<tr>
<td>Pb contained Dryers (ton)</td>
<td>3066</td>
<td>127</td>
<td>107</td>
<td>59</td>
<td>48</td>
<td>30</td>
<td>31</td>
<td>25</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>17688</td>
<td>2964</td>
<td>2439</td>
<td>1621</td>
<td>1370</td>
<td>1240</td>
<td>1153</td>
<td>1001</td>
<td>846</td>
<td>725</td>
</tr>
</tbody>
</table>
South Korea

- The Korea Paint and Printing Ink Cooperative (KPIC)
- The Environment & Health Act – Article 23 (Controls harmful materials at places for children)
  - Enforcement Decree - Article 16 (Environmental Safety Standard on the Places for Children)
- Act on the Resources Recycling of the Electric & Electronics Goods and Automobiles
  - Enforcement Decree Article 9 (Restrictions on Harmful Chemicals, recycling, Limitations on the containing, etc.)
  - Article 29 (Measures based on the survey results on the safety, etc.)
  - Enforcement Decree - Article 14 (Scope of Harmful Chemicals, etc.)
  - * Industrial goods for children: Ban on the use of Pb exceeding 90mg/kg
Taiwan

- Taiwan Paint Industry Association (TPIA)
- Lead control in Taiwan on toy coatings

New Zealand

- New Zealand Paint Manufacturers Association (NZPMA)
- Lead is not banned in NZ, but most manufacturers have adopted a self-imposed non-use, which NZPMA supports.
Questions?
IPPIC Secretariat
1500 Rhode Island Ave. NW
Washington, DC 20005
202-462-6272 Tel
202-462-8549 FAX
secretariat@ippic.org
www.ippic.org