

## HEALTH & SAFETY LABELING, AND OTHER CHEMICAL HAZARD MANAGEMENT ISSUES IN THE ARTS...

There are a host of specific labeling rules and practices in the arts, and other chemical hazard management issues relative to human health/safety and environmental protection, as follows...

### LHAMA, ASTM D-4236, ACMI & California Proposition 65

The federal Labeling of Hazardous Art Materials Act (**LHAMA**) became law in November 1990. It governs the labeling of hazardous art materials nationally, and is enforced by the Consumer Product Safety Commission (CPSC). The law's principal intent is to assure that art materials are labeled to warn consumers of potential chronic (long-term/slow-emerging) hazards via a new mandatory ASTM standard. **ASTM D-4236** is a standard published by the (non-industry chaired) "artists paints" subcommittee of the American Society for Testing & Materials (ASTM). As the standard itself declares, "Since knowledge about chronic health hazards is incomplete and warnings cannot cover all uses of any product, it is not possible for precautionary labeling to ensure completely safe use of an art product." "Conforms to D-4236" on an art material label does **NOT** mean the product is "non-toxic." Rather, it means:

- The material has been evaluated by a toxicologist for acute and chronic toxicity;
- The label names the ingredients identified as presenting a chronic health hazard, if any; and
- A product presenting a chronic health hazard comes with safe use instructions.




The Art & Creative Materials Institute, Inc. (**ACMI**) conducts a broad-based certification program in accordance with ASTM D-4236, to determine the appropriate consumer labeling that is required. ACMI has historically used a number of different seal types (as depicted below) to illustrate whether certain art materials can be certified as non-toxic or must bear appropriate cautionary health and safe use labeling. However, for the purposes of streamlining and simplifying the various seal types and their meaning, art materials produced after 2009 will only bear one of two seal types—the AP seal or the CL seal.



**California Proposition 65** is an additional labeling precaution commonly found on some hazardous art materials, which is in addition to those facilitated through LHAMA, ASTM D-4236, and ACMI. The presence of the "Ca Prop 65" symbol indicates that some specific chemical ingredient within the larger chemical material is known to the state of California to cause cancer, birth defects or other reproductive harm.

## Summary

As a result of the phase-out of certain ACMI seals for products produced after 2009 via the LHAMA/ASTM D-4236/ACMI system, only the following 2 ACMI seals, or the CA Prop 65 symbol, should be found on new products, along with their meanings:

 <p>The logo is circular with 'ACMI' at the top and 'AP' in large letters in the center. The outer ring contains the text 'ART &amp; CREATIVE MATERIALS INSTITUTE' and 'CERTIFIED'. Below the circle, it says 'Conforms to ASTM D 4236'.</p>	<p>Products bearing the AP seal of the Art &amp; Creative Materials Institute, Inc. (ACMI) are certified non-toxic. A medical expert evaluates each product and its ingredients. A product can be certified non-toxic only if it contains no materials in sufficient quantities to be toxic or injurious to humans, or to cause acute or chronic health problems. AP certification is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and federal law P.L. 100-695.</p>
 <p>The logo is octagonal with 'ACMI' at the top and 'CL' in large letters in the center. The outer ring contains the text 'ART &amp; CREATIVE MATERIALS INSTITUTE' and 'CERTIFIED'. Below the octagon, it says 'Conforms to ASTM D 4236'.</p>	<p>Products bearing the CL seal of the Art &amp; Creative Materials Institute ("Caution Label") contain ingredients that are toxic or hazardous, but they can be used safely with appropriate caution. Materials that bear the CL seal should be used only by those persons who are able to read, understand, and follow suggested safety precautions for handling those materials. The Caution Label signifies that although the product contains a toxic element, it can be handled safely if the directions on the container or packaging are followed. Many such art products cannot be made non-hazardous, but are necessary for certain creative activities. When used in properly supervised and controlled conditions, they can be enjoyed with complete safety.</p>
 <p>The symbol consists of a square border containing the text 'CA PROP' at the top and '65' in large, bold numbers in the center.</p>	<p>The State of California requires clear and reasonable warnings on products and/or storage containers containing chemicals that have been shown to cause cancer, birth defects, or other reproductive harm. Even if these products contain only trace levels of harmful chemicals, a warning is required by the State of California. Manufacturers of certain products have included warnings pursuant to California Proposition 65, and caution is recommended when using products marked with the Prop 65 icon.</p>

## OSHA, MSDS's and HAZCOM Labeling

Regardless of the efforts of the CPSC and ACMI through the LHAMA/ASTM D-4236 standard, as well as the state of California's "Prop 65", all of which seek to warn consumers of the hazards of art materials through standardized labeling, employers who permit the use of hazardous chemicals by its employees have a number of additional compliance obligations under OSHA standards (specifically, 29 CFR 1910.1200—Hazard Communication), as follows...

The **OSHA Hazard Communication Standard** compels employers to develop a 5 part program to comply with its standard, including the following:

1. Develop and maintain a written HAZCOM plan;
2. Maintain an inventory of hazardous chemicals in the workplace;
3. Maintain an MSDS for each chemical in its inventory;
4. Manage a labeling system relating to both original manufacturer's containers, and secondary containers used for dispensing/other purposes; and
5. Properly train its employees on the safe use of hazardous chemicals.

**MSDS's** (or Material Safety Data Sheets), are documents that describe in detail various data regarding chemical formulations or products, upon which occupational and environmental risk assessments are based, and include the following:

- Chemical product and company identification
- Composition and information on ingredients
- Hazards identification
- First aid measures
- Firefighting measures

- Accidental release measures
- Exposure controls - personal protection
- Handling and storage
- Physical and chemical properties
- Stability and reactivity
- Toxicological information
- Ecological information
- Disposal considerations
- Transport information
- Regulatory information

Employers are required to maintain (and make accessible) an MSDS for each chemical formulation or product it maintains or uses on its premises, and has additional training obligations for its employees.

In regards to **HAZCOM labeling**, most hazardous chemicals (whether in the arts or not) are normally shipped/received with adequate hazard warnings on their original manufacturer's labels, and as such require no additional labeling on behalf of the employer or its employees. However, when hazardous chemicals (in bulk/large containers) are transferred or dispensed into secondary containers, this secondary container no longer maintains an original manufacturer's hazard warning label. So, employers under the OSHA HAZCOM standard must apply a HAZCOM label to effectively communicate hazard warnings. Typically, employers use the NFPA HAZCOM labeling system, which graphically conveys hazard information on a 0-4 scale, across health, fire and reactivity criteria, that is derived from the MSDS.

### **Comparing The LHAMA/ASTM D-4236/ACMI/CA Prop 65 Provisions With The OSHA/MSDS/HAZCOM Labeling Requirements—In An Academic Setting**

While some value can be derived from the consumer labeling system promulgated by LHAMA/ASTM D-4236/ACMI and the state of California's "Prop 65", there remain many problems with it, as follows:

1. First, not all chemicals used in artistic disciplines are "art materials" intended to be regulated under the LHAMA. Many latex/water based and alkyd/oil-based paints found in painting disciplines, and glazes/underglazes/metallic stains found in ceramics disciplines, are indeed labeled in accordance with the LHAMA/ASTM D-4236/ACMI/CA Prop 65 provisions. However, it is far more often the case that hazardous chemicals (like solvents in painting disciplines, photo-chemicals in photography disciplines, clay-making ingredients in ceramic disciplines, corrosives in printmaking disciplines, etc., etc...) do **NOT** have LHAMA/ASTM D-4236/ACMI/CA Prop 65 related labeling. As such, chemical hazard risk assessments must rely upon OSHA related labeling and MSDS information.
2. Second, since Hamilton College is an employer whose employees (within the arts and beyond) use hazardous chemicals, its chemical safety obligations (from procurement, through use and disposal) are accordingly more closely aligned with what OSHA and the EPA requires, whether it be labeling or hazard assessment related considerations. Therefore, hazard labeling under LHAMA/ASTM D-4236/ACMI/CA Prop 65 is of informational value only, and may not provide the basis for compliance under the OSHA HAZCOM standard. As an example, Hamilton's art department could not establish compliance with the OSHA HAZCOM standard if it chose to label a secondary chemical container with an AP/CL seal, and/or a CA Prop 65 icon. These seals/icons are for

consumer/general public information only, and are not suitable for employee hazard communication and compliance.

3. Third, the LHAMA/ASTM D-4236/ACMI/CA Prop 65 provisions give very little consideration to the protection of the environment. For example, there are instances where hazardous art materials are labeled in conformance with LHAMA and use the AP (non-toxic) seal but contain ingredients like cadmium, which relegates any waste generated by the use of the product as hazardous waste under federal EPA regulations despite the non-toxic designation.
4. Finally, as an institution of higher learning, Hamilton has many students who fall outside of the purview of OSHA since students are not employees. However, Hamilton's faculty and other employees must still develop ways to communicate and mitigate the risks associated with chemicals and other hazards in the academic environment. In the general sense, faculty have certain liberties as to how they effectively achieve "safety" (however it's defined) in an academic setting, so long as they're sufficient to avoid actual or potential impacts to student health and safety. But it has long been the policy and philosophy of the College's EHS department that while OSHA doesn't necessarily regulate the "classroom", OSHA's workplace rules should at the very least provide the baseline upon which environmental health and safety considerations in the classroom are managed. In other words, OSHA (and EPA) rules set the minimum guidelines for student **AND** employee health and safety, and faculty are encouraged to go beyond those minimum guidelines as they see fit.

### **Conclusions & Summary**

Art disciplines that use potentially hazardous chemicals or materials should be familiar with the labeling provisions associated with LHAMA/ASTM D-4236/ACMI/CA Prop 65. However, it's equally important to understand that for the reasons noted above, this labeling system is intended to provide "quick reference" and universally understood information to consumers and the general public. This labeling system is neither an effective nor thorough risk assessment and hazard evaluation tool for employees in an occupational or academic setting, and as such does not constitute an alternative to compliance with existing OSHA (and EPA) standards. Further, the responsible manufacturers/suppliers of hazardous art chemicals/materials that make both LHAMA (et al) **AND** OSHA information readily available to its product's users are the companies that Hamilton College should be closely associating itself with from a purchasing perspective (as in this [LINK](#)).

**Example Applications of the LHAMA/ASTM D-4236/ACMI & OSHA HAZCOM Labeling Systems in the Arts**

	<p>2 Winton cadmium hue oil paints, 1 carrying the older ACMI “non-toxic” seal, and 1 carrying the newer ACMI “non-toxic” seal.</p>		<p>A newer Winton cadmium yellow oil paint with no ACMI seal (only “conforms to ASTM D-4236” language). But this label does have other cautionary information on the label (do not spray apply, contains cadmium zinc sulphide).</p>
	<p>A Winton Liquin solvent, carrying the ACMI “caution label” seal.</p>		<p>An all-purpose Elmer’s glue, carrying the older ACMI “non-toxic” seal.</p>
	<p>2 containers of Amaco glaze compounds for use in ceramics. Note that the Antique Green container on the left carries the ACMI “caution label” seal, and has additional written information stating that lead, copper and cobalt are ingredients with health hazards in the product. The Sand container on the right carries the ACMI “non-toxic” seal, but does not have other hazard related information on the label.</p>		
	<p>A Graphics Chemical Ink product that for unknown reasons carries both the ACMI “non-toxic” and “caution label” seals.</p>		<p>A very old container of grease that contains neither ACMI seals, nor adequate OSHA Hazcom information.</p>





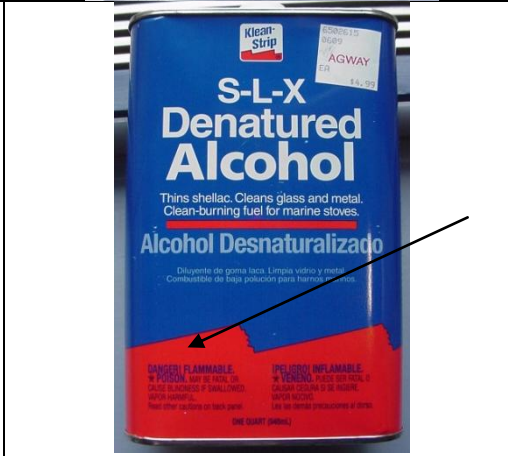
A hazardous chemical in manufacturer's original container. As this is not exclusively an art material, there is no ACMI seal; only typical written hazard information on the label as per OSHA.



Another hazardous chemical in original manufacturer's container. As this is not exclusively an art material, there is no ACMI seal; only typical written hazard information on the label as per OSHA.



A solvent typically found in art print-making studios, carrying both OSHA HAZCOM related symbols, and the ACMI "caution label" seal.



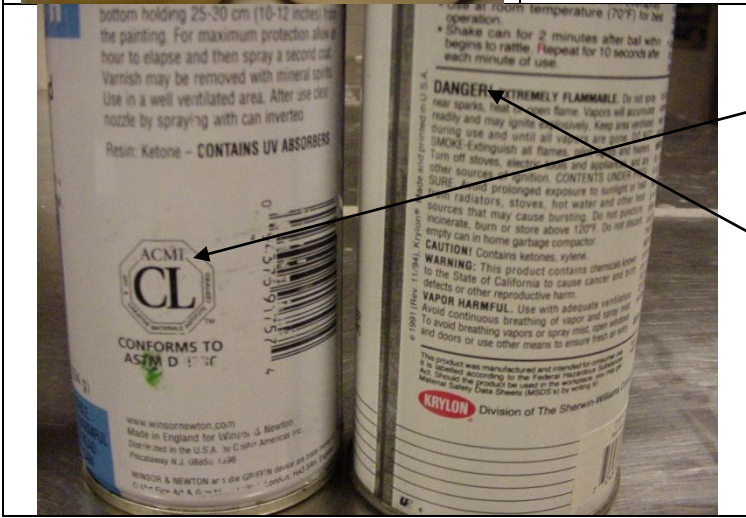
Another solvent typically found in art print-making studios, but also commonly used outside of art disciplines. There is no ACMI seal; only typical written hazard information on the label as per OSHA.



2 secondary chemical containers holding ceramic clay-making ingredients, each with an OSHA HAZCOM label.



Another secondary chemical container holding ceramic clay-making pigments. Again, this container has an OSHA HAZCOM label, as well as an indication that "excess material must be disposed of as hazardous waste".



These 2 original manufacturer's containers of spray paint (as with the print-making solvent examples above) exemplify 2 different hazard labeling strategies. The container on the left is manufactured by Winsor & Newton, and is typically used in art-related disciplines. As such, the container labeling reflects LHAMA conformance, including the ACMI "caution label" seal. The container on the right is manufactured by Krylon, and is commonly used outside of art applications. As such, it contains no ACMI labeling, but rather typical written hazard information on the label as per OSHA.