



ART AND CRAFT MATERIALS IN SCHOOLS: GUIDELINES FOR PURCHASING AND SAFE USE

Office of Environmental Health Hazard Assessment – California Environmental Protection Agency
October 2014

These guidelines for the purchase and safe use of art and craft materials are intended as a reference for school staff, instructors, parents, and others who participate in art and craft projects with children.

Today's safety and labeling laws are aimed at ensuring that art and craft products primarily designed or intended for use by children age 12 and younger are safe when used as directed. Some art and craft products marketed for the general public may be inappropriate for children because they contain toxic chemicals that can be ingested, inhaled, or absorbed through the skin. It is assumed that with appropriate labeling, people over the age of 12 will understand written information regarding health hazards and can use art materials as directed. Children age 12 and younger may not understand hazards associated with use and cannot reliably use art materials as directed; this may result in potentially dangerous exposure to ingredients.

California Law and Purchasing for Use by Students

California law ([Education Code §32064](#)) prohibits the purchase of art or craft materials containing toxic substances for use by students in grades K-6, and requires that art products purchased for use by students in grades 7-12 are properly labeled to inform users of long-term (chronic) health risks and instructions for safe use. These purchasing requirements apply to schools, school districts, and governing authorities of private schools.

This law also requires the Office of Environmental Health Hazard Assessment (OEHHHA) to develop a list of art and craft materials that cannot be purchased for use in grades K-6 ([Education Code §32066](#)). This list is a resource to assist schools in complying with the purchasing requirements.

Although not required by law, avoiding art materials that appear on the [OEHHHA list](#)

Kindergarten – 6th Grade

Items to be purchased must not contain a toxic substance. A [list of products that cannot be purchased for use by students in K-6th grade](#) is attached to these guidelines, or available at the OEHHHA website.

If an item to be purchased does not appear on the list, the purchaser must ensure that the item is properly labeled* and that it does not bear acute or chronic health hazard labels.

7th Grade – 12th Grade

All products to be purchased must be properly labeled* to inform users about potential chronic health hazards and safe use instructions.

* Federal requirements govern product labeling – see next page.

when purchasing for use by students in grades 7-12 is a good precautionary measure. Teachers and students should carefully read and follow instructions for safe use.

Beyond Legal Requirements Regarding Purchasing by Schools

Listed products should also be avoided when requesting donations or instructing families on the purchase of art and craft supplies. Donated supplies that are not properly labeled for health hazards (see next section) should be discarded, and supplies that bear health hazard labels should not be directed to K-6th grade classrooms. Schools are encouraged to inventory existing art and craft supplies and remove materials bearing health hazard labels from K-6th grade classrooms.

There is another California law (commonly known as [Proposition 65](#)) that requires warnings regarding exposures to chemicals known to the state to cause cancer, birth defects, or other reproductive harm. A typical warning says: *“This product contains a chemical known to the state of California to cause cancer (or birth defects or other reproductive harm).”*

Federal Law and Product Labeling

Federal law imposes certain toxicological review and labeling requirements on art and craft materials. The [Federal Hazardous Substances Act](#) (Sec. 23 [15 U.S.C. §1277]) requires all art and craft product labels to include information about acute and chronic health hazards and safe handling instructions as applicable, and a statement of conformity to ASTM D-4236, the mandatory art product health labeling guidelines that specify these requirements. This law also prohibits children’s products, including children’s art materials, from containing an accessible hazardous substance.

Federal law does not define ‘non-toxic’ and does not prohibit use of this term on art products that do not require cautionary labeling. Some products labeled ‘non-toxic’ can cause harmful effects when used in an unintended manner.

Labels to Look for when Purchasing Art and Craft Materials



**Conforms to
ASTM D-4236**

All art and craft products to be purchased must bear a statement of conformity to ASTM D-4236 to ensure proper health hazard labeling in accordance with federal law.



DANGER!

CAUTION

Materials bearing these health hazard labels must not be purchased for use by students in K-6th grades.

If a product has been found to contain a hazardous substance, the label must contain a signal word to call attention to the hazard, such as DANGER, CAUTION, WARNING, HAZARD, or POISON. The label may also contain the statement “Keep out of reach of children”. These are clear indications that the product is not appropriate for use by children age 12 and younger.

The [Consumer Product Safety Improvement Act](#), another federal law, limits the allowable concentration of lead in children's products to 0.01%, or 100 parts per million. Paint intended for most consumer products and household purposes is subject to a limit of 0.009%, or 90 parts per million, but there is **no lead limit for art paint products** unless the product is primarily designed or intended for use by children age 12 and younger.

Exposures and Health Risks Associated with Art and Craft Materials

Child-Specific Exposure Concerns

Young children are curious and experimental, have a natural habit of putting things in their mouths, are less concerned with staying clean and avoiding contamination, and are less able to understand and evaluate future consequences of current activities. Use of art materials by children will result in contact with their hands, face, mouth, hair, and/or clothing, providing ample opportunity for chemicals to be ingested or absorbed through the skin.

In addition to having a higher likelihood of exposure to art and craft materials, children are particularly susceptible to the effects of hazardous substances due to their small size, high metabolic rates, and developing organs. Reducing the amount and number of exposures to toxic substances early in life is likely to help prevent adverse health effects later on.

Toxicity and Exposure Routes

The use of age-appropriate art and craft products is important because certain products contain substances such as metals (for example lead- and cadmium-containing pigments in paints) and solvents (such as in adhesives and paint thinners) that can cause immediate and/or long term health effects. The amount of a toxic chemical in a product and the nature of the exposure (including the number of times and how long the exposures occur) required to produce adverse health effects may be uncertain, particularly for long-term effects. For example, skin or eye contact with a strong acid may cause severe burns immediately; however, it may take repeated exposures to cause dermatitis from contact with nickel, or years of multiple exposures to a cancer-causing chemical (such as benzene used as a solvent or methylene chloride in paint strippers) to cause tumors. Moreover, the exposure time and concentration that produces an adverse effect often varies between individuals. Being cautious and limiting exposures to potentially harmful art and craft materials will likely minimize, if not prevent, the possibility of developing adverse health effects.

Exposure to toxic chemicals in art materials may occur in any of the following ways:

- **Inhalation:** Particles or chemicals may be released into the air in the form of dust, powders, aerosols, vapors, or fumes. When inhaled, they can cause

irritation, damage the lungs, or be absorbed and cause damage elsewhere in the body.

- **Ingestion:** Particles and chemicals can be swallowed and absorbed into the body. Young children may put their hands or art materials in their mouths or nearby food and drinks may become contaminated.
- **Skin/eye contact:** Some chemicals can cause irritation or burns upon coming into contact with skin and eyes, or can be absorbed and cause damage elsewhere in the body. Caustic substances and certain solvents are particularly damaging following skin or eye contact.

Reducing Exposure

Processes to Avoid

Some art or craft projects involve processes that are inherently inappropriate for children because they carry heightened risks of hazardous materials being inhaled or coming into contact with skin. For example:

- **Airbrushing and spray painting** suspend pigments in the air, increasing risk of inhaling chemicals.
- **Certain steps in the ceramic-making process** may expose users to silica dust in dry clay, heavy metals in powdered glazes, or toxic fumes emitted during firing.
- **Etching** with acid poses a risk of corrosive contact with the skin, and may result in irritating vapors.
- **Fixative sprays** suspend adhesives or other chemicals in the air, increasing risk of inhaling chemicals.
- **Film and photograph developing** involves toxic chemicals that can come into contact with skin or eyes, or that can produce fumes.
- **Soldering** involves very hot materials that may contain lead or other toxic components, posing a risk of burns, ingestion following skin or surface contamination, and exposure to harmful fumes.

These processes are not appropriate for young students, and should be performed only by an adult using appropriate protective gear. Processes that involve the use of hazardous materials and that produce vapors, fumes, suspended particles, spattering, or splashing should not be performed while young students are present.

Materials to Avoid

Art and craft materials that contain harmful ingredients or that can result in higher chemical exposures should be avoided, and safer alternatives should be substituted.

Materials to Avoid	Safer Alternatives
Aerosols, sprays	Liquid non-aerosol products, manual applicators
Cold water dyes, commercial dyes, powder dyes	Plant-based dyes (such as canned beets, cranberries, frozen blueberries, turmeric)
Instant papier-mâché	Papier-mâché made from newspaper and library paste or white paste (flour/starch and water)
Powdered forms of clay, glazes, paints, pigments	Moist clay, liquid non-aerosol products
Products containing lead or heavy metals (enamel, glaze, paint)	Similar products without health hazard labels, water-based markers and paints
Solvent-based products (permanent markers, rubber cement, turpentine)	Water-based glues, markers, and paints

Precautions

In addition to following safe use instructions detailed on art product labels, further precautions can be taken to keep instructors and students safe. For example:

- **Ensure proper ventilation** – Open windows and use fans to introduce clean air and blow vapors away from students. Avoid air disturbance when using powders.
- **Keep food and drinks away** – Separate eating area from project area to reduce the risk of ingestion.
- **Use protective barriers** – Gloves, smocks, safety glasses, goggles, and surface coverings may prevent contact with skin and contamination of classroom materials or food.
- **Closely supervise art and craft projects** – Instructors should make sure students are aware of applicable safety precautions and are using materials safely.
- **Clean up spills immediately** – Use a wet cloth to clean up spills to prevent contact with skin and contamination of classroom materials.

Cleaning and Storage

When the art or craft project is complete, steps can be taken to minimize chemical exposure as teachers, staff, and students move on to other activities. For example:

- **Ensure all participants wash their hands** after the project is completed.
- **Use a wet cloth to clean surfaces** to prevent contamination of other classroom materials or food.

- **Ventilate classroom** to expel lingering vapors or airborne particles.
- **Store materials in original containers**, or affix original labels to new containers if materials are transferred.
- **Securely close containers** to prevent spills or vapor leaks.
- **Wet mop, or vacuum with a high-efficiency HEPA filter** to clean floors without stirring up dust.

Avoiding hazardous processes and materials, taking precautions, securely storing materials, and thoroughly cleaning project areas will reduce student and staff exposure to hazardous chemicals that may be in art and craft materials.

Further Actions and Resources

Schools and Districts Can...

- **Provide Art Smarts! to teachers** to post in classrooms, as well as to parents who wish to provide safe art and craft activities for children at home. This fact sheet is available at: <http://oehha.ca.gov/risk-assessment/art-hazards>
- **Report products** that do not appear on the list of art and craft materials that may not be purchased for use in K-6th grade but either a) bear hazard labels, or b) do not bear a statement of conformity to ASTM D-4236. Send product details to art.hazards@oehha.ca.gov for possible inclusion in future versions of the list.

Additional Resources

Office of Environmental Health Hazard Assessment:

- Visit the OEHHA website for the *Art Smarts!* fact sheet, the most current list of hazardous art materials, and toxicological information.
Art hazard information: <http://oehha.ca.gov/risk-assessment/art-hazards>
- For further information, contact Laurie Monserrat or Karen Randles at OEHHA.
1001 I St., PO Box 4010, Sacramento, CA 95812-4010
(916) 324-2829
art.hazards@oehha.ca.gov

California Department of Education:

- Visit the Department of Education website for Visual and Performing Arts resources.
www.cde.ca.gov/ci/vp/
For further arts information from the Department of Education, contact Mary Rice at:
mrice@cde.ca.gov.

Consumer Product Safety Commission:

- Visit the Consumer Product Safety Commission website for a list of recalled products, and for information regarding the Federal Hazardous Substances Act and the Consumer Product Safety Improvement Act.
www.cpsc.gov

Further reading:

→ Many resources detail safety issues and precautions relating to the use of art and craft materials, including:

- “Art and Craft Safety Guide” – Consumer Product Safety Commission
www.cpsc.gov/PageFiles/112284/5015.pdf
- “Information for Art Class Teachers: Chemical Safety” – Health Canada
www.hc-sc.gc.ca/cps-spc/pubs/indust/art-eng.php

National Poison Control Center Hotline:**1-800-222-1222**

Poisoning information and free, confidential medical advice are available at all times. Poisoning prevention tips and additional resources are available at: www.aapcc.org