



## Smart Marker Choices for the Classroom



School administrators and teachers are faced with a wide range of choices when determining which markers are appropriate for students. *Water-based* or “washable” markers contain inks that are easily washed from surfaces, clothing and skin. *Solvent-based* markers leave permanent markings on surfaces and clothing that are difficult to wash off.

Solvent-based markers emit volatile chemicals with recognizable odors that can build up in air, especially in poorly ventilated classrooms.<sup>1</sup> Some chemicals can cause immediate health effects. These effects depend on the chemical and the amount of exposure. Immediate effects can include eye and skin irritation, headache, dizziness and nausea. In addition, long-term exposure to some of these chemicals have been associated with cancer.

Children are particularly susceptible to the toxic effects of chemicals due to their small size, high metabolic rates, and developing organs. They are also more likely than adults to sniff markers, put markers in their mouths, and draw on their skin. By following the tips for purchasing safer markers below, you can help reduce children’s exposures to harmful solvents.

### Tips for purchasing markers:

- Follow the California law that prohibits schools from purchasing art or craft materials containing a toxic substance for students in kindergarten and grades 1 to 6. A list of products that should not be purchased for schoolchildren is available from the Office of Environmental Health Hazard Assessment (OEHHA) website, see below.
- Purchase water-based (washable) markers.
- Do not purchase scented markers since they encourage sniffing and tasting.
- Pay attention to product labels and warnings (see box below for more information).
  - Make sure the product has the “Conforms to ASTM D-4236” label.
  - Do not purchase products with labels indicating a health hazard.
  - Do not purchase products that have a California Proposition 65 warning. (See example next page.)
- Do not rely solely on manufacturers’ claims in choosing markers; always check for appropriate labels and health warnings as described above.
  - Markers labeled as “non-toxic” or “low-odor” may still contain ingredients like alcohol, which can cause headache and dizziness.
  - If markers are advertised as “suitable for children,” be sure to check for the legally required labels to verify this.

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## Product labels and warnings: What to look for and what they mean

Look for the following labels when choosing markers for classroom use:

**Conforms to  
ASTM D-4236**

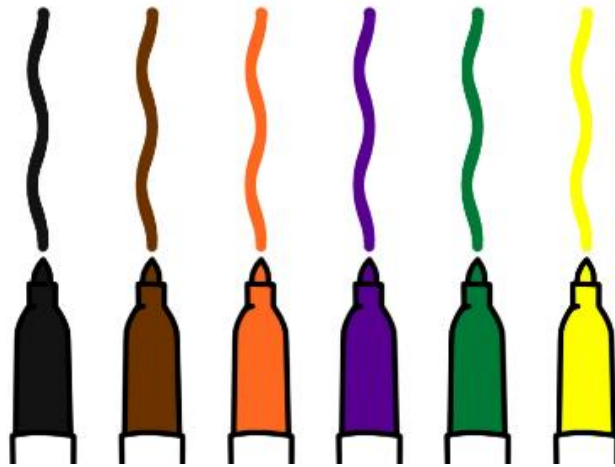


**WARNING:** This product can expose you to chemicals including [name of chemical], which is/are known to the State of California to cause [cancer]/[birth defects or other reproductive harm]. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

This statement, required by federal law, indicates that the product complies with ASTM-4236, an international industry labeling standard. This assures that the product label informs users about potential chronic health hazards and safe use.

A cautionary label such as this is required by federal law for products that pose health hazards. Do not purchase products with these labels.

California's Proposition 65 requires businesses to provide warnings about significant exposures to chemicals that can cause cancer, birth defects, or other reproductive harm. Products with this warning should not be used by children.



A list of products that should not be purchased for students in kindergarten through 6<sup>th</sup> grade, guidance on the purchase and safe use of art products in schools, and other information are available at the Office of Environmental Health Hazard Assessment (OEHHA) website: <https://oehha.ca.gov/risk-assessment/art-hazards>

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<sup>i</sup> Scientists from OEHHA, UC Berkeley and the Lawrence Berkeley National Laboratory recently conducted a study that measured emissions of hazardous chemicals from markers. The 2016 scientific paper is available.