

Cadmium-Free FAQs

ABOUT CADMIUM AND CADMIUM-FREE PAINTS

1. Why should I choose cadmium-free over cadmium paints?

There is no globally harmonised view on potential harm of cadmium pigments, some regions consider it safe (the EU) and some don't (US, specifically in California). We have developed the first paints that provide parity performance to genuine cadmium paints without using this particular pigment. Now artists have a choice and can decide for themselves. Cadmium itself is a heavy metal that can be harmful to health, some evidence suggests that cadmium pigments are not harmful to health but for those in doubt there is now a cadmium-free alternative for peace of mind. The cadmium-free alternative is a safer choice since contrary to genuine cadmium paints, it qualifies for the AP symbol which means it has been assessed as safe to use in a toxicological evaluation conducted by ACMI.

The additional benefit of cadmium-free paints are that they durable even with outdoor exposure, whereas cadmium paints are susceptible to weathering in outdoor environments.

In addition, although not regulated we recommend that genuine cadmium paints should be handled with care and not rinsed down the sink.

2. How is cadmium in paint bad for me?

Cadmium in pigment form, as it is usually cadmium combined with another chemical, e.g. Cadmium Sulfide, is shown to have less health concerns than pure cadmium especially in the EU where they classify cadmium paint as non-hazardous. However, in some markets, for example California, they deem cadmium paint to have a cancer risk. Cadmium pigment in paint may not be bad for you but it depends on which data you look at. There is no globally harmonised view on cadmium pigments, some find it safe (e.g. EU) some don't (e.g. California). To address the doubts that exist and the concerns of many artists we have developed a cadmium-free alternative that provides parity performance.

3. Where is the evidence that cadmium from pigment is a risk to personal health and environment?

From a personal health perspective, in California, cadmium is on the Proposition 65 list of chemicals known to cause cancer, developmental and reproductive harm. In California, they don't distinguish cadmium from cadmium in pigments. For more information, please refer to <http://oehha.ca.gov/proposition-65/cadmium-fact-sheet>.

From an environmental perspective, moving away from heavy metals, such as cadmium and lead, has positive impacts.

4. Why is Liquitex launching cadmium-free?

Liquitex was the first water-based acrylic paint created in 1955 and since then we have partnered with artists to ensure that we continually evolve and innovate. Since there is no universal view on the potential harm of cadmium pigments we have decided to acknowledge this and offer both alternatives side by side so that artists can make a choice based on their personal preference. We are proud of being first in the market to introduce a parity performance cadmium-free alternative to health and safety conscious artists.

Cadmium-Free FAQs

CADMIUM-FREE PAINT DEVELOPMENT AND TESTING

5. How long did the cadmium-free colors take to develop?

The development of cadmium-free colors was the work of several Liquitex Chemists over a three year period, evaluating a huge range of pigments available internationally to discover the very best in terms of performance and match to existing Liquitex cadmium colors.

6. How were the cadmium-free colors tested?

For full validation there were two routes of testing; one technical in the laboratory, and one subjective with a panel of artists. The thorough nature of the testing provided the high confidence level that the cadmium code has finally been cracked.

7. What were the technical or laboratory test conducted?

Several tests were applied that demonstrated that the cadmium-free colors are technically on par with the equivalent cadmium colors:

- **Lightfastness** to assess longevity
- **Color mass tone** for brightness and overall match
- **Undertone** for subtleties in thin layers
- **Color reduction 10:1** with Titanium White to compare color strength and shade when mixed
- **Viscosity** and rheology for handling properties
- **Specific gravity** to test weight
- **Opacity** check over black and white test card to assess coverage

8. How was the artist testing conducted?

Regular users of acrylic paint and in particular cadmium colors were identified for the testing. Each was given two identical sets of color, one set containing genuine cadmium paint and the other containing cadmium-free. The testing was conducted blind, without the artists' knowledge of the difference between each set. They were allowed one month to work with and compare both sets. They were given a journal to keep during the assessment plus take through a questionnaire at the end. None identified the fact that one set was cadmium-free.

CADMIUM-FREE PAINT CERTIFICATION

9. Who are ACMI?

The Art and Creative Materials Institute, Inc. (ACMI) is an international association of about 200 art, craft, and creative material manufacturers which seeks to promote safety in art and creative products through its certification program. Colart are a member of ACMI. ACMI-certified product seals (AP Approved Product and CL Cautionary Labeling) indicate that these products have been evaluated by a qualified toxicologist and are labelled in accordance with federal and state laws.

ACMI's toxicology team, located at Duke University's Division of Occupational and Environmental Medicine, has over 30 years of experience evaluating more than 60,000 art material formulations for ACMI members. ACMI also has a Toxicological Advisory Board composed of leading toxicological experts who act as a review board on issues of toxicity, review the criteria used by ACMI's Toxicologist and make recommendations to ACMI. For more information, please refer to www.acmiart.org

Cadmium-Free FAQs

10. What does it mean for cadmium-free paints to carry the AP seal?

The AP (Approved Product) Seal identifies art materials that are safe and that are certified in a toxicological evaluation by a medical expert to contain no materials in sufficient quantities to be toxic or injurious to humans, including children, or to cause acute or chronic health problems.

11. Have the cadmium-free paints been ACMI (Art and Creative Materials Institute, Inc) tested to give it the AP seal?

Yes, all cadmium-free colors have been fully certified as AP.