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Titanium Dioxide Classified as Suspected Carcinogen

What is Titanium Dioxide and its use?

Titanium dioxide, a white pigment, is the ninth most abundant element in the world and is found naturally in rocks and ores. Titanium Dioxide has been used for hundreds of years in paints and is also used in plastic goods, inks and paper due to its non-reactive and luminous properties. It is widely used in the decorative and artists paints industry to make our products opaque, its used in many other colours in addition to Titanium White. Titanium Dioxide is also used in many white or coloured products, including food, cosmetics and UV protection products. Zinc Oxide is also used as a white pigment but is not as effective as Titanium Dioxide.

Upcoming EU Regulation

On the 18th of February 2020 the European Commission have confirmed a new regulation, changing the hazard classification of Titanium Dioxide from non-hazardous to suspected carcinogen category 2.

This change was based on evidence from an old study on rats that was submitted to the European Commission by France. For years industry leaders from around the world disputed information from the study. Disputing the methodology and the accuracy of its extrapolation to humans, supporting their argument with an independent study involving over 24,000 employees who regularly handled Titanium Dioxide without reports of elevated cancer rates.

However, despite industry objections and lobbying from trade associations like CEPE, the European Commission have upheld their decision to classify Titanium Dioxide as a suspected carcinogen. This regulation is to be effective from the **1st of October 2021** an amendment to the previous entry into force date of **9th of September 2021**.

The classification is due to the mechanical effects of dust in lungs and not specific to the chemical properties of Titanium Dioxide, therefore the classification only concerns Titanium Dioxide of a respirable size i.e. powder with a diameter of < 10 µm.

Products Impact

The classification change is going to impact Colart's products in different ways:

1. General purpose products adult art materials:
   Titanium Dioxide is not volatile therefore consumers of artists materials will not be exposed to Titanium Dioxide at levels that could cause lung overload that is suspected of

causing cancer. Meaning our finished products will not be classified as a Suspected Carcinogen. However, we are required to warn consumers of the potential dangers of breathing in droplets or dust during use. Finished products containing > 1% of Titanium Dioxide (particle size ≤ 10 µm) will require the following warning label when sold in the EU:

EUH211: 'Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist'

EUH212: 'Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.'

2. Toys and cosmetics:
   We are following the EU commission closely to understand the impact to the Toy and Cosmetic regulations, as they must wait for official publication of a CLP classification change before responding.

What is Colart doing?

Colart is working with our suppliers and chemists to try and avoid classification wherever possible. Due to the unique properties Titanium Dioxide this will not all ways be possible without compromising on quality and hence labelling will be required in most cases.

External Sources of Information

The official publication can be viewed here
Link to TDMA https://tdma.info/what-is-titanium-dioxide/
CEPE
- press release
- Q&A for employees
- Q&A for customers