London 12 March 2020

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
   The future is unclear for toys and cosmetics as these specialist regulations prohibit the use of carcinogens. Since the classification is driven by the mechanical properties of a dust and not the chemical properties of Titanium Dioxide, there is a strong chance exemptions will be written into the regulations. In the months following the publication we will be closely following any governmental activity and react to any decisions accordingly.

Colart Operations

Manufacturing Facilities: General impact should be minimal, as there is no increased risk or changes to safe handling measures. The current PPE and occupational health measures used to protect against dust are sufficient. French laws on CMRs mean Le Mans will need to reduce exposure to Titanium Dioxide and increase measures to protect workers.

Distribution Facilities: Once the Titanium Dioxide is made into a finished product, workers cannot be exposed to Titanium Dioxide in powder form. Therefore, no additional safety measures need to be introduced in the supply chain.

Hazardous Waste: Waste containing Titanium Dioxide will be classified as hazardous only if it meets both the following criteria:

- The Titanium Dioxide is in powder form
- If the Titanium Dioxide content exceeds the concentration limit (1%) mentioned in Annex III to Directive 2008/98/EC (Waste Framework Directive)

Disposal of finished goods containing Titanium Dioxide should not impact the way we currently handle our waste streams.

What is Colart doing?

We have identified a first list of pastes and SKUs impacted and which will be shared with operations, brand and commercial. We are still working to refine the list so this will change over time. The GLT have been informed and are reaching out to their contacts in other effected organisations. Labelling is a key challenge for this project, due the small quantity size of products we sell. **Whilst we have an operation team working to solve the issue, the regulatory team would appreciate feedback if you see any innovative solutions in your market.**

Brexit

As of the 31st of January, the UK has left the European Union and now are under a transition period the UK will follow EU law until the 31st of December. After the 31st of December it is unclear how closely aligned the UK will be to EU and if this law will be implemented.

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

See the announcement for clients here