

Titanium Dioxide Could Be Identified as a Carcinogen

EU REACH, EUROPE, CHEMICALS OF INTEREST

By ROGER PEARSON, July 26, 2017

The risk assessment committee of the European Chemicals Agency (ECHA) has proposed that the **white pigment titanium dioxide**¹⁾ (TiO₂) be classified as a potential carcinogen through the inhalation route. As reported by Chemical & Engineering News (CEN), the ECHA Committee took this action at the request of Anses, the French environmental and occupational health agency.

According to CEN TiO₂ is the world's most widely used white pigment. It provides the white color to numerous consumer goods, including paints, plastics, paper, foods, cosmetics, and medicines. It is also used in tattoos and toothpaste.

TiO₂ has been classified **by IARC as possibly carcinogenic to humans (Group 2B) since 2006**²⁾. The ECHA committee concluded that TiO₂ is a potential carcinogen, Category 2 under the ECHA classification system. **ECHA rejected the request by Anses**³⁾ that it classify TiO₂ as presumed carcinogen (Group 1B). The ECHA Committee concluded that the action of the pigment is due to inflammation and oxidative stress on the respiratory system.

CEN notes that the ECHA Committee, like IARC, bases its classifications on data solely relevant to hazard, not exposure. Nevertheless, the hazard characterization could lead to requests for more research or labeling requirements; a decision to be made by the European Commission.

The Titanium Dioxide Manufacturers Association disagrees with the ECHA action. It argues that there is 50 years of epidemiological data on more than 24,000 workers showing no link between exposure to TiO₂ and cancer in humans.

Titanium dioxide (airborne, unbound particles of respirable size) is listed as a carcinogen under Proposition 65 [see **Titanium Dioxide Listed Under CA's Prop. 65 as Cancer Causing**⁴⁾, September 13, 2011].

Resources for this article

1. white pigment titanium dioxide

<https://echa.europa.eu/harmonised-classification-and-labelling-previous-consultations/-/substance-rev/13832/term>

2. Chemical & Engineering News

<http://cen.acs.org/articles/95/i25/Europe-call-TiO2-carcinogen.html?type=paidArticleContent>

3. by IARC as possibly carcinogenic to humans (Group 2B) since 2006

<http://monographs.iarc.fr/ENG/Monographs/vol93/index.php>

4. ECHA rejected the request by Anses

<https://echa.europa.eu/documents/10162/4fd87a5d-e671-43e4-a3b8-30e51a723107>

5. Titanium Dioxide Listed Under CA's Prop. 65 as Cancer Causing

<https://prop65clearinghouse.com/articles/1979>