



## Availability of important raw materials – Titanium dioxide

### ▪ **Recommendation to classify titanium dioxide as a suspected carcinogen**

Based on a scientific evaluation, the Committee for Risk Assessment (RAC) of the European Chemicals Agency (ECHA) recommended on 8 June 2017 to classify the white pigment titanium dioxide as a substance suspected of causing cancer in humans by inhalation (carcinogen category 2). Now the classification decision rests with the REACH Regulatory Committee, with the European Commission in a lead role. This decision is expected for spring 2018.

### ▪ **No risk for humans – therefore, classification is not justified**

The recommendation was given against the backdrop of fears of workers developing lung cancer when exposed to dust emissions – inter alia, from titanium dioxide – in industrial manufacture and processing. It relies on an over 20-year old study in rats which inhaled titanium dioxide dust over a very long period of time. The reaction observed in this study is not substance-specific for titanium dioxide; it is characteristic for a large number of dusts. Neither this nor other studies indicate any risk for humans. Quite the contrary: Studies that stretched over several decades and covered ca. 24,000 workers in 18 titanium dioxide factories (inter alia, in Germany) did not find an increased risk of tumour formation. Thus, in Germany there is not a single case recognized by employers' liability insurances of occupation disease caused by TiO<sub>2</sub>.

### ▪ **Titanium dioxide is one of the essential raw materials for paints and coatings**

With a share of 57% the paint and printing ink industry is by far the biggest customer for TiO<sub>2</sub>. Titanium dioxide is added to paints as a pigment and firmly bound in the binder matrix after that. Consequently, it cannot be inhaled. Because of the excellent light-scattering property of its crystals, titanium dioxide has the highest opacity of all white pigments and is indispensable in the manufacture of white wall paint and colour ink shades. No alternatives of equal quality are available. A classification as a suspected carcinogen of category 2 would have far-reaching consequences: Paints would require labelling "suspected human carcinogen", causing much uncertainty among consumers. As a matter of principle, titanium dioxide-containing printing inks could be no longer used for food packaging. Moreover, colour residues and other types of waste with a titanium dioxide share of 1% would need to be treated as hazardous waste, resulting in much higher disposal costs.

### **We are calling for the following:**

#### **1. No classification as carcinogenic of titanium dioxide**

Titanium dioxide has been used safely in our industry for many decades. There is no scientific evidence that would suggest a carcinogenic effect in humans. Moreover, the CLP classification method is the wrong approach: CLP serves to classify substances that are hazardous due to their "intrinsic" – i.e. individual – (chemical) properties, while it is not suitable for particle-related (physical) effects like in the case at issue.

#### **2. European harmonisation of dust limit values at the workplace**

The discussed risks are based solely on dust exposure by inhalation. Protection against dust emissions is an occupational health & safety topic. In most EU Member States, protection is ensured by way of dust limit values at the workplace. Here, Germany has a pioneering role. Instead of the proposed classification of titanium dioxide one should, for example, think about harmonising dust limit values in Europe.