

**MATERIAL SAFETY DATA SHEET**  
**(EC) NO. 1907/2006**  
**TITANIUM DIOXIDE**

**DATE 01-01-2011**  
**REF 20110101**



**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**Substance name: Doduide Titanium Dioxide Pigment-Paint Coatings-Dry Grades**  
**Types: SR-235,SR-236,SR2-37,SR-2377,SR-238,SR-239,SR-240,SR-2400,SR-241,SA-50**  
**REACH Reg. No.: 01/2119489379-17-0046**  
**CAS No.: 13463-67-7**  
**EC No.: 1907/2006**

**Identified uses: White pigment for paints and coatings**

**Distributor: J & S TECHNIK AG**  
**Walke 23**  
**CH 9100 Herisau**  
**Phone 0041 713 548 403 (Switzerland)**  
**e-mail: [info@js-technik-ag.de](mailto:info@js-technik-ag.de)**  
**Internet: [www.js-technik-ag.ch](http://www.js-technik-ag.ch)**

**SECTION 2: HAZARDS IDENTIFICATION**

**The mixture is non-dangerous in accordance with Directive 1999/45/EC.**

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Component</b>	<b>CAS NO.</b>	<b>EC NO:</b>	<b>Content (%)</b>
<b>TITANIUM DIXOIDE</b>	<b>13463-67-7</b>	<b>236-675-5</b>	<b>80-99</b>
<b>ALUMINUM HYDROXIDE</b>	<b>21645-51-2</b>	<b>244-492-7</b>	<b>&lt;10</b>
<b>AMORPHOUS SILICA</b>	<b>112926-00-8</b>	<b>231-545-4</b>	<b>&lt;10</b>

**SECTION 4: FIRST AID MEASURES**

**Inhalation: Remove person to fresh air. If signs/symptoms continue, get medical attention.**

**Skin contact: Wash off with soap and water.**

**Eye contact: Rinse with plenty of water.**

**Ingestion: No specific intervention is indicated. Consult a physician if necessary.**

**SECTION 5. FIRE-FIGHTING MEASURES**

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**Further information: The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.**

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions: Avoid breathing dust.**

**Environmental precautions: Do not flush into surface water or sanitary sewer system.**

**Methods for cleaning up: Pick up and arrange disposal without creating dust. After cleaning, flush away traces with water.**

**SECTION 7. HANDLING AND STORAGE**

**Handling**

**Advice on protection: This is a fully oxidized mineral product. As such it cannot support combustion or against fire and explosion participate in a dust explosion.**

**Storage:**

**Requirements for storage areas and containers**

**Keep container tightly closed in a dry and well-ventilated place.**

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

COMPONENTS	CAS NO	TYPE FORM OF EXPOSURE	CONTROL PARAMETERS	UPDATE	BASIS
TITANIUM DIXOIDE	13463-67-7	TWA RESPIRABLE DUST.	4 MG/M3	2007	ELV (IE)
		TWA TOTAL INHALABLE DUST.	10 MG/M3	2007	ELV (IE)

**Engineering measures**

**Use sufficient ventilation to keep employee exposure below recommended limits.**

**Personal protective equipment**

**Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.**

**Hand protection : Gloves**

**Eye protection: Safety glasses with side-shields**

**Hygiene measures: Avoid breathing dust. Wash hands before breaks and at the end of workday.**

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Form: powder,**

**Colour: white,**



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**Odour: none,**  
**pH: > 4**  
**Flash point: does not flash**  
**Relative density: 3,8 - 4,3**  
**Water solubility: insoluble**

### **SECTION 10. STABILITY AND REACTIVITY**

**Materials to avoid: None.**  
**Hazardous reactions: Stable**

### **SECTION 11. TOXICOLOGICAL INFORMATION**

**Acute oral toxicity: ALD/ rat: > 24 000 mg/kg**  
**Acute inhalation toxicity: ALC/ 4 h / rat : > 6,82 mg/l**  
**Acute dermal toxicity: ALD/ rabbit > 10 000 mg/kg**  
**Skin irritation: slight irritation**  
**Eye irritation: slight irritation**  
**Sensitisation: Did not cause sensitization on laboratory animals.**  
**Mutagenicity assessment: Not mutagenic in Ames Test.**  
**Carcinogenicity assessment: In lifetime inhalation studies rats were exposed for 2 years to respectively 10, 50 and 250 mg/m<sup>3</sup> of respirable TiO<sub>2</sub>. Slight lung fibrosis was observed at 50 and 250 mg/m<sup>3</sup> levels. Microscopic lung tumours were also observed in 13 percent of the rats exposed to 250 mg/m<sup>3</sup>, an exposure level that caused lung overloading and impairment of rat lungs clearance mechanisms. In further studies, these tumours were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. The pulmonary inflammatory response to TiO<sub>2</sub> particles exposure was also found to be much more severe in rats than in other rodent species.**  
**In February 2006, IARC has reevaluated Titanium dioxide as pertaining to Group 2B: "possibly carcinogenic to humans", based upon inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide. IARC evaluation guidelines consider the generation of tumours, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence.**  
**The conclusions of several epidemiology studies on more than 20000 TiO<sub>2</sub> industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO<sub>2</sub> dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO<sub>2</sub> dust. Based upon all available study results, DuPont scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.**  
**Human experience: Excessive exposures may affect human health, as follows:**  
**Inhalation**  
**Respiratory system: Cough, Shortness of breath**  
**Skin contact**  
**Skin: Discomfort, Itching**

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**Eye contact**

**Eyes: Excessive lachrymation, Irritation**

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects**

**Toxicity to fish: LC50/ 96 h/ Fathead minnow :: > 1 000 mg/l**

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Product: Dispose of as special waste in compliance with local and national regulations.**

**Contaminated packaging: If recycling is not practicable, dispose of in compliance with local regulations.**

**SECTION 14. TRANSPORT INFORMATION**

**Further information : Not classified as dangerous in the meaning of transport regulations.**

**SECTION 15. REGULATORY INFORMATION**

**Labelling according to EC Directives**

**The product does not need to be labelled in accordance with EC directives or respective national laws.**

**National legislation**

**Water contaminating class (Germany): nwg not water endangering**

**Self assessment**

**SECTION 16. OTHER INFORMATION**

**Restrictions on use**

**Doguide products may not be directly added to food or pharmaceuticals and are not recommended for use in medical devices or cosmetics.**

**Do not use Doguide materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from Doguide under a written contract that is consistent with Doguide policy regarding medical applications and expressly acknowledges the contemplated use.**

**Further information**

**For specific information on composition and properties, see Ddoguide Titanium Dioxide Pigment literature.,**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.**

