

SAFETY DATA SHEET	Page 1 of 8
	Issued on: January 3rd, 2000
Trade name: TITANIUM DIOXIDE	Revised on: January 3rd, 2018
	Revised version No.: 11

1. Identification of the substance/mixture and of the company/undertaking					
1.1.	Product identifier (Product registration number):	01-2119489379-17-0014 RC 8, RC 813, RC 817, RC 818, RC 82, RC 821, RC 823, RC 827, RC 833, RC 84, RC 843, RC 86, RC 87, RC 893, RC 898, RC E, RC P			Identification no.:
1.2.	Relevant identified uses of the substance/ mixture and uses advised against:	White pigment for application in paints, coatings, plastic material, paper, enamel, ceramics.			
1.3.	Details of the supplier of the safety data sheet (manufacturer, importer, only representative, downstream user, distributor):				
1.3.1.	Supplier name:	CINKARNA CELJE, d.d.			PE: Titanium Dioxide
1.3.2.	Supplier address and telephone:	Kidričeva 26, 3001 Celje - Slovenija, +386 3 427 60 00			
1.3.3.	E-mail (competent person) :	igor.kolenc@cinkarna.si			
1.4.	Emergency phone number :	In case of health risk, consult your doctor. Additional information are available: During working hours from 7 a.m. to 3 p.m. +386 3 427 65 77 +386 3 427 60 00			
2. Hazards identification					
2.1.	Classification of substance or mixture: (Regulation (EC) No. 1272/2008 and Directive 67/548/ECC or Directive 1999/45/EC)	In accordance with Regulation (EC) no. 1272/2008 it is not classified as hazardous substance. It does not meet the criteria for classification in accordance with Directive 67/548/ECC or Directive 1999/45/EC.			
2.2.	Label elements:	It does not meet the criteria for labelling in accordance with the EC Directive.			
2.3.	Other hazards:	Long exposure to dust can cause nose, eye, throat, lung or skin irritation.			
3. Composition / information on ingredients					
3.1./ 3.2.	Substances/ mixture				
Chemical name	CAS No.	REACH	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Classification according to 67/548/EEC

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	EC No. Index No.	Registration No.	wt/vol/ma x. conc.	Hazard statements (H)	Hazard class and hazard category
Titanium dioxide	13463-67-7 236-675-5	01-2119489379-17-0014	80 – 99.5		

4. First aid measures

4.1.	Description of first aid measures	
	Inhalation:	Ensure fresh air. Seek medical help in case the symptoms do not disappear.
	Skin contact:	Rinse the skin with soap and water. Seek medical assistance if necessary.
	Eye / mycosis contact:	Rinse with copious amount of water. Seek medical help if necessary.
	Ingestion:	Rinse the mouth with water. Seek medical assistance if necessary.
4.2.	Most important symptoms and effects, acute and delayed:	Dust may irritate the respiratory tract or cause coughing.
4.3.	Indication of any immediate medical attention and special treatment needed:	Special care is not required.

5. Fire-fighting measures

5.1.	Extinguishing media	The product is not combustible.
	Appropriate extinguishing media:	Use all extinguishing media that comply with the substances in the local environment.
	Inappropriate extinguishing media:	Unknown.
5.2.	Specific hazards arising from the substance or mixture:	The product is not reactive, flammable or combustible.
5.3.	Advice for firefighters:	Additional protection is not required. Protection in accordance with other circumstances.

6. Accidental release measures

6.1.	Personal precautions protective equipment and emergency procedures	
6.1.1.	For non-emergency persons:	Avoid inhalation of the dust and contact with skin or eyes. If necessary, use protective equipment such as goggles and gloves.
6.1.2.	For emergency persons:	If necessary, use protective equipment such as goggles and gloves.
6.2.	Environmental precautions	Do not wash into surface water or sewage system.
6.3.	Methods and material for containment and cleaning	

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6.3.1.	Appropriate spillage retaining techniques (fencing, covering drains, retaining procedures):	Mechanically collect and remove without producing dust. Wet product may cause slippery floor.
6.3.2.	Appropriate cleaning procedures	
	Neutralization techniques:	Product is neutral.
	Decontamination techniques:	Not required.
	Absorbent materials:	All inert absorbent material is appropriate.
	Cleaning techniques:	Carefully remove into the waste container (chapter 13).
	Sucking techniques:	With vacuum cleaner and dust particle filter.
	Required equipment for retaining / cleaning:	Basic protective equipment such as goggles and gloves.
6.3.3.	Inappropriate retaining or cleaning techniques:	Unknown.
6.4.	Reference to other sections:	Not required.
7. Handling and storage		
7.1.	Precautions for safe handling	
7.1.1.	Recommendations shall be specified to:	Prevent inhalation of dust.
	Safe handling of substance or mixture:	Use basic protective equipment such as goggles and gloves.
	Prevent handling of incompatible substances or mixtures:	Not required.
	Reduce the release of the substance or mixture to the environment:	Do not wash into surface water or sewage system.
7.1.2.	General working hygiene (prohibited eating, drinking and smoking within working area; washing hands, etc.):	Rules of basic working hygiene apply.
7.2.	Conditions for safe storage, including any incompatibilities	
	Management of risks associated with:	
	- explosive atmospheres:	No danger.
	- corrosive substances:	No danger.
	- incompatible substances or mixtures:	No danger.
	- evaporation substances:	The product is not volatile.

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	- potential ignition sources:	No danger.
	How to control the effects of:	
	- weather conditions:	Store in closed and ventilated space.
	- ambient pressure:	Not required.
	- temperature:	Not required.
	- sunlight:	Not required.
	- humidity:	Store in closed and ventilated storage area. Long-term storage in humid spaces may influence some quality parameters.
	- vibrations:	Not required.
	Securing integrity of substance or mixture by use of:	
	- stabilisers:	Not required.
	- antioxidants:	Not required.
	Other advice including:	
	- prevention specifications:	Not required.
	- specific designs for storage rooms or vessels (including retention walls and ventilation):	Not required.
	- quantity limitations regarding storage conditions:	Not required.
	- packaging compatibility:	Not required.
7.3.	Specific end use(s):	White pigment for application in paints, coatings, plastic material, paper, etc.

8. Exposure control / personal protection

8.1.	Control parameters	
8.1.1.	Limit values (LV):	
	DNEL	10 mg/m ³
	PNEC	Freshwater: > 0.127 mg/L Freshwater deposits: > 1000 mg/kg Sea water: > 0.62 mg/L Sea water deposits: > 100 mg/kg Soil: > 100 mg/kg Wastewater treatment plant: > 100 mg/kg

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8.2.	Exposure control	
8.2.1.	Appropriate technical and engineering controls:	Enable ventilation of working areas in order to keep the workers' exposure within limit values.
8.2.2.	Personal protective equipment:	
	- respiratory protection:	In case dusting occurs, use anti dust respirators FFP3 (EN 149).
	- skin protection:	Work clothing.
	- hand protection:	Gloves.
	- eye/ face protection:	Protective goggles closed on the sides (EN 166).
	- heat radiation protection:	Not required.
	Other:	Washing hands before breaks and at the end of working hours.
8.2.3.	Environment exposure control	

9. Physical and chemical properties

9.1.	Information on basic physical and chemical properties	
	- appearance:	Powder.
	- colour:	White.
	- odour:	Odourless.
	- pH:	Not applicable (solid substance).
	- melting/ freezing point:	1843 °C
	- boiling point and boiling range:	3000 °C
	- flash point:	Does not flash.
	- vaporization rate:	The product does not evaporate.
	- flammability (solid, gas)	The product is not flammable.
	- upper /lower flammability or explosive limit:	The product is not flammable or explosive.
	- vapour pressure:	Not applicable (solid substance).
	- vapour density:	Not applicable (solid substance).
	- relative density:	3,4 - 4,3 kg/dm ³
	- solubility:	The product is not soluble.
	- partition coefficient: n-octanol/water	Not applicable (solid substance).

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	- decomposition temperature:	The product does not decompose.
	- viscosity:	Not applicable (solid substance).
	- explosion properties:	The product is not explosive.
	- oxidation properties:	The product is not oxidising.
9.2	Other information	

10. Stability and reactivity

10.1	Reactivity:	The product is not reactive.
10.2	Chemical stability:	The product is stable under normal conditions.
10.3	Possible hazardous reactions:	No danger.
10.4	Conditions to avoid:	Unknown.
10.5	Incompatible materials:	Unknown.
10.6	Hazardous decomposition products:	Unknown.

11. Toxicological data

11.1	Information on toxicological effects	
	- acute toxicity:	Acute oral toxicity: LD 50/rat > 5000 mg/kg Acute oral toxicity by inhalation: LD 50/ 4h rat > 6,82 mg/l
	- skin corrosion /irritation:	Does not cause skin irritation.
	- serious eye damage/ irritation:	Does not cause eye irritation or is slightly irritating to eyes.
	- respiratory or skin sensitisation:	Inhalation of dust may cause nose, throat or lung irritation. If not removed in time, it can cause irritation of the mucous membrane. When ingested, it does not have harmful effects.
	- germ cell mutagenicity:	Tests for bacterial cultures and mammal cell cultures did not show any mutagenic effects.
	- Carcinogenicity:	In February 2006 the IARC came to the conclusion that there are not enough evidence that titanium dioxide has carcinogenic effects in humans. However, based on experiments in rats (inhalation), the IARC notes that there is enough proof for carcinogenicity in the studied animals (rats). General conclusion of the IARC is that Titanium dioxide is "possibly carcinogen" to humans (class 2B). This conclusion is based on the IARC rules that require the identification of carcinogenicity be made by confirming the results regarding the formation of tumours and performing two or more independent researches in one living

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		species in different laboratories or on separate occasions by various methods.
	- toxicity for reproduction:	It is not toxic for reproduction.
	- STOT – single exposure:	Unknown.
	- STOT – repeated exposure:	Unknown.
	- Inhalation hazards:	Inhalation of dust may cause nose, throat or lung irritation.

12. Ecological information

12.1.	Toxicity:	Toxicity for fish: LC ₅₀ / 96 h / Pimephales promelas (fathead minnow): > 1000 mg/l Toxicity for aquatic organisms: EC ₅₀ / 72 h / Pseudokirchneriella subcapitata (green algae): 61 mg/l Toxicity for aquatic invertebrates: EC ₅₀ / 48 h / Daphnia magna (water flea): > 1000 mg/l
12.2.	Persistence and degradability:	The product is bio non-degradable and insoluble in water.
12.3.	Accumulation in organisms:	The product does not accumulate in organisms.
12.4.	Mobility in soil:	Unknown.
12.5.	PBT and vPvB assessment results:	Unclassified substance PBT/ Unclassified substance vPvB.
12.6	Other adversative effects:	Unknown.

13. Disposal considerations

13.1.	Waste treatment methods:	Disposal and removal in accordance with local and state regulations.
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14. Transport information

	ADR, RID, ADN, IMDG, ICAO-TI/IATA-DGR	According to international transport law, the product is not labelled as hazardous.
14.1	UN number:	According to international transport law, the product is not labelled as hazardous.
14.2	UN proper shipping name (technical name if required):	Titanium dioxide.
14.3	Transport hazard class :	Not required.
14.4	Packaging group:	Not restricted.
14.5	Hazard to environment:	According to international transport law, the product is not labelled as hazardous.
14.6	Special precautions for user:	Not required.
14.7	Bulk transport by MARPOL 73/78 Annex II and IBC Code:	Not restricted.

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14.8.	Tunnel code:	Not required.
14.9.	Classification code:	Not required.
14.10.	Hazard label:	Not required.

15. Regulatory information

15.1.	Rules and regulations regarding health, safety and environmental hazard specific to the substance or mixture:	According to Regulation EC 1907/2006, the product is not hazardous.
15.2	Chemical safety assessment:	Chemical safety assessment has been carried out.

16. Other information

	Amendments made in the revised edition:	Safety data sheet is amended in all sections in order to harmonize with applicable legislation.
	List of relevant R phrases, hazard statements (H) and precautionary statements (P) which have not been written out in full in sections 2 to 15:	There are none.
	Training of personnel:	In accordance with the law on safety and health at work.
	Sources:	Official Gazette of the Republic of Slovenia no.: 110/03, 16/08, 43/11, 35/05, 54/07, 70/08, 88/08, 126/08, 84/06, 106/06, 110/07, 34/08. Regulation (EC) no.: 1907/2006, 1272/2008, 453/2010, 23/2008, 56/2010.
	A key or legend to abbreviation and acronyms used in the safety data sheet:	PBT – persistent, bio accumulative and toxic vPvB – very persistent and very bio accumulative STOT – specific target organ toxicity DNEL – derived no effect levels PNEC – predicted no effect concentration ADR – European agreement concerning the international carriage of dangerous goods by road RID – International rule for transport of dangerous substances by railway ADN – European agreement concerning the International carriage of dangerous goods by inland waterways IMDG – International maritime dangerous goods code ICAO-TI – Technical instructions for the safe transport of dangerous goods by air IATA – International air transport association

Data specified above are based on research and experience of the supplier at the time of compiling the present MSDS. The supplier may not assume responsibility in case the buyer/user should fail to use the product in accordance with the relevant suggestions and recommendations. No information contained in the present SMDS may release the buyer/user from liability to strictly follow any legal requirements regarding his business activities.