

Infosafe No™ 1CHKR	Issue Date : October 2021	RE-ISSUED by CHEMSUPP
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Product Name **TITANIUM DIOXIDE**

Not classified as hazardous

1. Identification

GHS Product Identifier	TITANIUM DIOXIDE																						
Company Name	CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)																						
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia																						
Telephone/Fax Number	Tel: (08) 8440-2000																						
Emergency phone number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)																						
E-mail Address	www.chemsupply.com.au																						
Recommended use of the chemical and restrictions on use	White pigment in paints, paper, rubber, plastics, etc.; opacifying agent, cosmetics, radioactive decontamination of skin, floor coverings, glassware and ceramics, enamel frits, delustering synthetic fibres, printing inks, welding rods, catalyst, high-temperature transducers (single crystals), semiconductor in electronics manufacturing, e.g., capacitors and laboratory reagent.																						
Other Names	<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Name</u></th> <th style="text-align: left;"><u>Product Code</u></th> </tr> </thead> <tbody> <tr><td>Anatase</td><td></td></tr> <tr><td>Titanic anhydride</td><td></td></tr> <tr><td>Titanium (IV) oxide</td><td></td></tr> <tr><td>Titanium white</td><td></td></tr> <tr><td>Titania</td><td></td></tr> <tr><td>Titanic oxide</td><td></td></tr> <tr><td>Titanic acid anhydride</td><td></td></tr> <tr><td>C.I. 77891</td><td></td></tr> <tr><td>C.I. Pigment white 6</td><td></td></tr> <tr><td>TITANIUM DIOXIDE AR</td><td>TA025</td></tr> </tbody> </table>	<u>Name</u>	<u>Product Code</u>	Anatase		Titanic anhydride		Titanium (IV) oxide		Titanium white		Titania		Titanic oxide		Titanic acid anhydride		C.I. 77891		C.I. Pigment white 6		TITANIUM DIOXIDE AR	TA025
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Other Information

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Not classified as hazardous according to the criteria of Hazardous Substances Information System (HSIS), Safe Work Australia. Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).
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3. Composition/information on ingredients

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Titanium dioxide	13463-67-7	100 %

4. First-aid measures

Inhalation	Remove victim to fresh air. Seek medical advice if effects persist.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek medical advice if symptoms persist.
Skin	Wash with plenty of soap and water. Seek medical advice if effects persist.

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Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	Titanium/titanium oxides.
Specific Methods	No limitations to the type of extinguishing media. Small fire: Use dry chemical, CO ₂ , water spray or foam. Large fire: Use water spray, fog or foam. If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.

6. Accidental release measures

Spills & Disposal	Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal. SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)

7. Handling and storage

Precautions for Safe Handling	Avoid ingestion and inhalation of vapours, or dusts. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Minimize dust generation and accumulation. Keep container tightly closed. Use with adequate ventilation. It should always be handled in an efficient fume hood or equivalent system. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Protect against physical damage.
Conditions for safe storage, including any incompatibilities	Store in a tightly closed container, in a cool, dry, ventilated area away from incompatible substances. Keep well closed and protected from direct sunlight and moisture. Protect against physical damage. Store away from heat and all sources of ignition. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
Storage Temperatures	Store at room temperature (15 to 25 °C recommended).
Unsuitable Materials	Metals such as aluminum, calcium, magnesium, potassium, sodium, and zinc.

8. Exposure controls/personal protection

Other Exposure Information	No exposure standards have been established for this product by Safe Work Australia, however, the TWA exposure standard for dusts/mists not otherwise specified is 10 mg/m ³ . All atmospheric contamination should be kept to as low a level as is workable. These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
Appropriate engineering controls	Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply

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	with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Body Protection	Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	White powder.
Odour	Odourless.
Melting Point	1843 °C
Boiling Point	2900 °C
Solubility in Water	Insoluble.
Solubility in Organic Solvents	Insoluble in organic solvents.
Specific Gravity	>3.0
pH	3.5 - 4.5 (40 g/l, 20 °C); ~ 7 (aqueous suspension, 1 in 10).
Volatile Component	0 %vol @ 21 °C
Flammability	Non combustible material.
Molecular Weight	79.90
Oxidising Properties	Titanium dioxide, particularly in the anatase form, is a photocatalyst under ultraviolet light. The strong oxidative potential of the positive holes oxidizes water to create hydroxyl radicals. It can oxidize oxygen, volatile organic compounds, nitrogen oxides or organic materials directly.
Solubility in other solvents (kg/m3)	Soluble in hot concentrated sulfuric acid, hydrofluoric acid, alkali. Insoluble in hydrochloric acid, nitric acid, diluted sulfuric acid.

10. Stability and reactivity

Chemical Stability	Stable under ordinary conditions of use and storage.
Conditions to Avoid	Dust generation and incompatible materials.
Incompatible Materials	Acids, alkali metals and other reactive metals (aluminium, calcium, magnesium, potassium, sodium, zinc, and lithium) + high temperature.

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Hazardous Decomposition Products	Titanium/titanium oxides.
Possibility of hazardous reactions	Reactive with acids. Slightly reactive to reactive with metals. A violent or incandescent reaction with metals (aluminum, calcium, magnesium, potassium, sodium, zinc, and lithium) may occur at high temperatures. Reaction of titanium dioxide and lithium occurs around 200 °C with a flash of light; the temperature can reach 900 °C.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	No hazard expected in normal industrial use. It is not absorbed following ingestion. Ingestion of large amounts may cause gastrointestinal (digestive) tract irritation with nausea, vomiting, diarrhoea or constipation, loss of appetite and pain. May cause ataxia (failure of muscular coordination), increased blood pressure, hallucinations, hypermotility, muscle contraction/spasticity, fatigue, psychosis, and tremors.
Inhalation	Dust is mildly irritating to the respiratory tract and may cause temporary respiratory irritation of the mucous membranes at occupational exposure levels. May be harmful if inhaled. High concentrations of dust may cause coughing, mild, temporary irritation, airway symptoms and restrictive lung impairment.
Skin	May cause mild irritation, redness and mechanical irritation (irritation from frictional action). It is believed not to be absorbed through intact skin. Low hazard for usual industrial handling.
Eye	Dust may cause mechanical irritation, mild irritation and possible reddening.
Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Not classified based on available information.
Chronic Effects	Long-term exposure to high concentrations of dust may cause chronic rhinitis and chronic bronchitis (increased mucous flow in the nose and respiratory system). Prolonged or repeated exposure may cause lung irritation, chest pain and slight lung fibrosis (scarring of the lungs). Repeated or prolonged exposure to massive concentrations of dust may cause lung injury by blocking blood vessels and distorting the shape of airways. May cause impaired pulmonary function, resemblance of silicosis without any fibrosis, functional change in trachea or bronchi, chronic pulmonary oedema. Long-term inhalation of high concentrations of pigmentary (powdered) or ultrafine titanium dioxide may cause lung cancer, based on animal evidence.
Serious eye damage/irritation	Not classified based on available information.
Skin corrosion/irritation	Not classified based on available information.

12. Ecological information

Ecological Information	No ecological problems are to be expected when the product is handled and used with due care and attention.
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13. Disposal considerations

Disposal Considerations Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

15. Regulatory information

Regulatory Information All the constituents of this product are listed on the Australian Inventory of Chemical Substances (AICS), or exempted. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Poisons Schedule Not Scheduled

16. Other Information

Literature References 'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'.
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.
Safe Work Australia, 'Hazardous Chemical Information System'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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Empirical Formula & Structural Formula TiO2

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