

World Changing Technologies Pte Ltd
8 Burn Road, #08-02/03 Trivex Singapore 369977

Tel: (65) 6717 6352

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:

Product Form: Mixture
Product Name: TiO2Ag
Product No.: 7004
Chemical Family: Titanium Dioxide (TiO₂)

Intended Use Of The Product:

Use of the mixture: Photocatalyst

Manufacturer's Name and Address:

World Changing Technologies Pte Ltd
8 Burn Road
#08-02/03 Trivex
Singapore 369977
Tel: (65) 6717 6352
E-mail: service@wctinfo.com

Emergency Telephone Number:

Emergency number: (65) 6717 6352

SECTION 2 – HAZARDS IDENTIFICATION

Classification Of The Mixture:

Health Rating: 0 -None
Flammability Rating: 0-None
Reactivity Rating: 0-None
Contact Rating: I-Slight
Lab Protective Equip: Goggles, Lab Coat

Skin contact

May cause mild irritation and redness.

Eye contact

May cause mild irritation, possible reddening

Inhalation

May cause mild irritation to the respiratory tract.

Ingestion

Not expected to be a health hazard via ingestion.

Chronic Exposure

Long-term exposure may result in mild fibrosis (scarring of the lungs)

Aggravation of Pre-existing Condition

Persons with pre-existing lung disease may be more susceptible to the effects of mixture.

SECTION 3 – COMPOSITION. INFORMATION ON INGREDIENTS

None of the ingredients are considered hazardous according to the criteria of 29CFR1910.1200 and DOT Reg 49 CFR172.

Ingredient	CAS No.	Chemical Formula	Content wt%	OSHA PEL		ACGIH TLV	
				PEL	STEL	TWA	STEL
Titanium Dioxide	13463-67-7	Ti O ₂	<1%	None	N/Av	None	N/Av
Silica	7631-86-9	Si O ₂	<1%	None	N/Av	None	N/Av
Silver	7440-22-4	Ag	<1%	None	N/Av	None	N/Av
Water	7732-18-5	H ₂ O	96-98%	None	N/Av	None	N/Av

SECTION 4 – FIRST AID MEASURES**Skin contact**

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before re-use. Thoroughly clean shoes before re-use. Get medical attention if irritation develops.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

Inhalation

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion

Not expected to require first aid measure. If large amounts were swallowed give water to drink and get medical advice.

SECTION 5 – FIRE FIGHTING MEASURES

Flammability: Not flammable. Not combustible.

Flammability Limits: Not applicable

Extinguishing media: Not applicable

Fire and explosion hazards: None

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Prohibited materials:

None known.

Spill response / cleanup:

Stop leak as quickly as possible, contain spill, and wash area with water.

Special spill response procedures: None required.

SECTION 7 – HANDLING AND STORAGE

Safe handling procedures: Keep container closed when not in use. Protect containers against physical damage.

Storage requirements: Store in a cool, dry, ventilated area away from sources of heat. Keep from freezing, keep out of direct sunlight. Inspect periodically for damage or leaks.

SECTION 8 – EXPOSURE CONTROLS. PERSONAL PROTECTION

No special protection or precautions have been identified for using this product under directed consumer use conditions. The following recommendations are given for production facilities and for other conditions and situations where there is increased potential for accidental, large-scale or prolonged exposure.

Ventilation/engineering controls: Use adequate ventilation to maintain air contaminants

Permissible exposure levels: For individual ingredient exposure levels, see Section 2

Tools for protection: When dispensed in the form of a mist during application of the product, it is recommended to wear a gauze mask and protective glasses for protection

Skin and body protection: Wear protective gloves and clean body-covering clothing

Eye protection: Use chemical safety goggles and/or full-face shield where splashing of solution is possible.

Hand protection: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands

Protective clothes: Unnecessary for application

Protective gloves: Unnecessary for application

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state, odor and appearance: Yellowish transparent aqueous solution

Odor threshold: Not applicable

pH: 7.5 - 9.5

Specific gravity: 1.091 (Determined at standard temperature and pressure)

Solubility: Water Soluble

VOC Content: (% Wt): 0.00% (0.00 lbs/gallon)

SECTION 10 – STABILITY AND REACTIVITY

Stability and reactivity: Stable under normal storage and handling conditions

Hazardous polymerization: Will not occur

Conditions to avoid: Reactive with acids, alkali

Hazardous decomposition products: None known

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicological data; This product does not contain any known or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens and OSHA 29 CFR 1910.1000, Subpart Z.

Ingredient	LD ₅₀ (mg/kg)	
	acute oral, rat	acute dermal, rabbit
Titanium Dioxide	>5000 mg/kg	>5000 mg/kg
Silver	>5000 mg/kg	>5000 mg/kg
Silica	>5000 mg/kg	>5000 mg/kg

Carcinogenicity: None of the ingredients listed are classified as carcinogenic by ACGIH, IARC, NIOSH, NTP or OSHA

Epidemiology: N/Av

Teratogenicity: N/Av

Neurotoxicity: N/Av

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: None known

Environmental fate: Readily degraded

SECTION 13 – DISPOSAL CONSIDERATIONS

Methods of disposal: Dispose of in a manner consistent with federal, state and local regulations.

SECTION 14 – TRANSPORT INFORMATION

Not classified as hazardous for transport (ADR/RID, ADNR, IMDG, ICAO/IATA)

DOT PSN Code: AHD

DOT Proper Shipping Name: TiO2Ag

DOT Class: 5 Photocatalyst

SECTION 15 – REGULATORY INFORMATION

Toxic Substances Control Act (TSCA)

Health and Safety Reporting List - None of the chemicals are on the Health & Safety Reporting List

Chemical Test Rules - None of the chemicals are under a Chemical Test Rule.

Sections 12b - None of the chemicals are listed under TSCA 12b.

TSCA Significant New Use Rule - None of the chemicals in this material have a SNUR under TSCA

Superfund Amendments and Reauthorization Act (SARA)

Section 302 Q (RQ) - None of the chemicals in this product have an RQ.

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Section 302 (TPQ) - None of the chemicals in this product have a TPQ.

SARA Codes - CAS # 151-21-3: Aqueous, non-acute

Section 313 - None of the chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

Occupational Safety and Health Administration (OSHA):

None of the chemicals in this product are considered hazardous by OSHA.

SECTION 16 – ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall World Changing Technologies Pte Ltd be liable for any claims, losses, or damages of any third party or for lost profits of any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if World Changing Technologies Pte Ltd has been advised of the possibility of such damages.

References:

ACGIH, Threshold Limit Values and Biological Exposure Indices for 2006

US EPA Title III List of Lists – January, 2005 version

Legend:

ACGIH – American Conference of Governmental Industrial Hygienists

AIHA – American Industrial Hygiene Association

CAS – Chemical Abstract Services

CFR – US Code of Federal Regulations

DOT – US Department of Transportation

EPA – US Environmental Protection Agency

HMIS – Hazardous Materials Identification System

IARC – International Agency for Research on Cancer

NIOSH – National Institute of Occupational Safety and Health

NTP – National Toxicology Program

OSHA – US Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

SARA – US Superfund Amendments and Reauthorization Act

STEL – Short Term Exposure Limit

TLV – Threshold Limit Values

TSCA – Toxic Substance Control Act

TWA – Time Weighted Average