



QINGDAO SANHUAN COLORCHEM CO., LTD.

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MATERIAL SAFETY DATA SHEET

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Titanium Dioxide Rutile, SHR-268, SHR-218,SHR-266

Chemical Formula: TiO₂

Molecular Weight: 79.90

CAS No.: 13463-67-7

HS Number :320611.1000

Company Identification:

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Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

Component	TiO ₂	ZrO ₂	Al ₂ O ₃	SiO ₂
CAS number	13463-67-7	1314-23-4		
HS Number	32061110			
Percentage	≥92.0%	0-4%	0-8%	0-6%
Hazardous	No	No	No	No

Section 3 - HAZARDS IDENTIFICATION

Emergency Overview

Color: white

Form: Powder

Odor: Odorless

Chemically stability: stable

Product is non-combustible, Does not present a fire hazard or other immediate concern for emergency responders, except of a slippery condition if product gets wet.

Potential Health Effects

Eye contact: It (in powder) may cause mechanical eye irritation.

Skin contact: Powder may irritate skin if not wash off from skin promptly.

Skin absorption: Not expected to be absorbed through intact skin. Ingestion: No adverse health effects anticipated by this route. Inhalation:

a. Acute effects: Exposure to dust may cause temporary drying effect and/or mild irritation of nose, throat

and lungs, and may aggravate pre-existing respiratory conditions.

b. Chronic effects/Carcinogenicity: Titanium dioxide has been characterized by IARC as possibly

carcinogenic to humans(group 2B) through inhalation. This classification is based on upon animal

inhalation studies. Epidemiology studies do not suggest an increase risk of cancer in humans from



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occupational exposure to titanium dioxide.

Section 4 : First Aid Measures

Inhalation: Remove to fresh air.

Ingestion: If swallowed, give several glasses of water to drink. Vomiting may occur spontaneously, but DO

NOT INDUCE! Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact: Wipe off excess material from skin then flush skin with plenty of water. Remove contaminated clothing and shoes.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally.

NOTE TO PHYSICIAN: For inhalation, consider oxygen.

Section 5 : Fire Fighting Measures

Flash point: N.A. Method: N.A. LEL: N.A UEL:N.A

Unusual fire hazards: None

Fire: Not considered to be a fire hazard. Will not burn

Explosion: Sealed containers may rupture when heated.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode..

Sealed containers of this material may rupture at moderate temperatures (release of water vapor).

Section 6 : Accidental Release Measures

Soil Release:Dig holding area such as lagoon, pond or pit for containment. Cover with plastic sheet or tarp

to minimize spreading and protect from contact with water.

Water Release: just wash out

Occupational Release:Ventilate area of leak or spill. Keep unnecessary and unprotected people away from

area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

Section 7 : Handling and Storage

Handling:



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- a. Avoid contact with eyes.
- b. Do not breathe dust or mist.
- c. Avoid high concentrations of dust or mist air through the use of ventilation or other suitable controls.

Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage; observe all warnings and precautions listed for the product.

Section 8 : Exposure Controls/Personal Protection

Airborne Exposure Limits: None established.

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved): For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls.

Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Clothing: Wear appropriate clothing.

Gloves: impervious gloves or specified by manufacturer

Section 9 : Physical and Chemical Properties

Appearance: white powder

Odor: Odorless.

Color: white

Solubility: Insoluble in water.

Molecular Weight: 79.90

Molecular Formula: TiO₂

Specific Gravity: 3.9-4.2

pH: neutral

% Volatiles by volume @ 21C (70F): 0

Vapor Density (Air=1): No information found.



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Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information founded

Coefficient of Water/Oil Distribution: Not available

Section 10 : Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Reactivity: Stable at normal temperatures and pressure

Conditions to Avoid: Stable at normal temperatures and pressure

Polymerization: Will not polymerize.

Hazardous Decomposition Products: not occur

Hazardous Polymerization: Will not occur.

Section 11 : Toxicological Information

Irritation: Inhalation of dust or mist can cause irritation of eyes, nose, throat and lungs.

Eye contact: Powder/particle can cause mechanical irritation.

Skin contact: Can cause irritation if not wash off from skin promptly.

Skin absorption: Not expected to be absorbed through intact skin. Ingestion: Not expected to produce adverse effects.

Effects of Chronic exposure

Titanium Dioxide: In lifetime inhalation studies of rats, airborne, respirable –size titanium dioxide particles

have been shown to cause an increase in lungs tumors at concentrations associated with substantial particle

lungs burdens and consequential pulmonary overload and inflammation. The potential for these adverse

health effects appears to be closely related the particle size and the amount of exposed surface area that

comes into contact with the lung. However, test with other laboratory such as mice and hamsters, indicate

that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung

cancer. Epidemiology studies do not suggest an increase risk of cancer in humans from occupational

exposure to titanium dioxide.

Titanium dioxide has been characterized by IARC as possible carcinogenic to humans (Group 2B) through

inhalation(Not ingestion) It has not been characterized as potential carcinogen by either NTP or OSHA.

Alumina oxide, Zirconium oxide, Silicon oxide: Inhalation of dust particles composed of these material may

cause drying of mucous membranes and irritation of nose, throat and lungs with nosebleeds, cough,

difficulty breath or shortness of breath. Based on animal studies, long time inhalation exposure to high



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doses of ultrafine particles could lead pulmonary and inflammation and could be a factor in subsequent development of chronic lung disease. Silicon oxide does not induce the lung effects associated with crystalline silica.

Medical conditions Aggravated: Respiratory disorder

Toxicity: Titanium dioxide

Oral LD 50 >10,000 mg/kg (rat)

Dermal LD 50 >10,000 mg/kg (rabbit)

Inhalation LD (4 hr) >6.8 mg/l (rat)

SECTION 12: ECOLOGICAL INFORMATION

No data available.

Section 13 : Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14 : Transport Information

No regulated in Hazard class

IMO/IMDG regulation information: not under IMO/IMDG

SECTION 15 REGULATORY INFORMATION

United States Regulatory Information

SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information

DSL: Yes

NDSL: No

SECTION 16 OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. 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 we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from using the above information