



SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER: WESTCO TiO2 CR-501

Other means of identification

Chemical name: Titanium dioxide, TiO2 Rutile

Recommended use and restrictions on use: Pigment

Supplier information:

Supplier: Western Reserve Chemicals

Supplier Address: 4837 Darrow Road
Stow, OH 44224 USA

Telephone: 330-650-2244

Fax: 330-650-2255

Website: www.wrchem.com

Emergency phone number: Chemtrec: 1-800-424-9300 US

SECTION 2 – HAZARD(S) IDENTIFICATION

Classification of the substance or mixture:

Carcinogenicity, Category 2

OSHA Regulatory Status: Classified as hazardous based on components.

GHS Label Elements

Hazard symbol:



Signal word: Warning

Hazard statements:

Suspected of causing cancer.

Precautionary Statements:

Obtain special instructions before use.



Do not handle until all safety precautions have been read and understood.

Use personal protective equipment as required.

Avoid breathing dust/ fume/ gas/ mist / vapors/ spray.

IF exposed or concerned: Get medical advice/attention.

Store locked up. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink.

Keep away from heat, sparks, open flames and hot surfaces.-No smoking.

Dispose of contents/container in accordance with local regulations.

Prevent dust accumulation.

Hazard(s) not otherwise classified (HNOC): Contact with dust can cause mechanical irritation or drying of the skin. Dust contact with the eyes can lead to mechanical irritation.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

<u>Components Chemical Identity</u>	<u>CAS Number</u>	<u>Weight%</u>
Titanium Dioxide	13463-67-7	93-96
Silicon Dioxide	7631-86-9	0-0.3
Aluminum hydroxide	21645-51-2	2.5-3.5
Zirconium dioxide	1314-23-4	0.2-1.0

SECTION 4 – FIRST AID MEASURES

Inhalation: Remove affected person to fresh air. If not breathing provide artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

Ingestion: Rinse mouth thoroughly with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If swallowed, consult physician immediately.

Skin contact: Remove contaminated clothing or shoes. Wash affected areas of skin with soap and plenty of running water. If irritation develops or persists, seek medical attention. Launder contaminated clothing and clean shoes thoroughly before reuse.

Eye contact: Irrigate eye(s) with water or normal saline solution for 20-30 minutes. Remove contact lenses and lift upper and lower eyelids occasionally to ensure thorough flushing. Seek medical attention.

Potential Acute Health Effects:



- Eye contact:** Eye contact with dust may cause corneal scratching which could result in irritation to eyes such itching, reddening, tearing and burning. Avoid eye contact.
- Inhalation:** Single exposure to fumes or dust is not expected to cause acute toxicity.
- Skin contact:** Repeated or prolonged skin contact may cause skin irritation. Avoid skin contact.
- Ingestion:** Ingestion of large amounts is unlikely. Ingestion of small amounts is not likely to cause acute toxicity.

Potential Chronic Health Effects: Prolonged exposure to dust may lead to respiratory irritation with throat discomfort, coughing or breathing difficulty.

Notes to physician: Treat symptomatically. No specific treatment.

Indication of immediate medical attention and special treatment needed: No data available.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing method: In case of fire, use carbon dioxide (CO₂), dry chemical, or water spray.

Specific hazards arising from chemical: This product is not flammable, but may become involved in a fire with other materials.

Special firefighting equipment and precautions for firefighters: A self-contained breathing apparatus (SCBA) operating in positive pressure mode and full firefighting protective clothing should be worn for combating fires.

Hazardous combustion products: Carbon monoxide, carbon dioxide and oxides of sulfur.

NFPA Ratings: Health: 2 Fire: 0 Reactivity: 0

Hazard Scale: 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe



SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Avoid dust formation. Ensure adequate ventilation. Avoid breathing dust. For personal protective equipment, see Section 8. Unnecessary personnel should be kept clear of the area.

Methods and materials for containment and cleaning up:

Avoid dust formation. Take up any spilled material by mechanical means and place into sealed containers for proper disposal. Dispose of waste materials including empty product bags or drums in accordance with local, state and federal regulations.

Environmental precautions:

Do not allow product to enter sewage or ground water.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling: Maintain good housekeeping to prevent dust accumulation. Avoid breathing dust. Product as sold is not considered combustible, but further processing of the product may result in formation of combustible dusts. Take precautionary measures against static discharges. Observe good industrial hygiene practice for chemical handling. See Section 8 for personal protection equipment.

Conditions for safe storage, including any incompatibilities: Store in cool (<35°C), dry (<50% relative humidity) conditions. Keep container tightly closed in a well-ventilated area. This chemical is incompatible with strong oxidizers and strong acids. Violent or incandescent reactions may occur with metals (e.g. aluminum, calcium, magnesium, potassium, sodium, zinc and lithium). (NTP, 1992).

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

	<u>Value</u>	<u>Occupational Exposure Limits</u>	<u>Regulation</u>
Titanium dioxide:	TWA	10 mg/m ³	US ACGIH Threshold Limit Values (TLV)
	TWA	15 mg/m ³	US OSHA Permissible Exposure Limit (PEL)

Appropriate engineering controls: Local exhaust recommended when generating excessive levels of airborne particles. Use sufficient ventilation to keep employee exposure below recommended limits. Discharge from the ventilation system should comply with applicable air pollution control regulations.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Safety glasses with side shields.

Skin/Hand protection: Wear impervious gloves to avoid skin contact with this product. When handling molten product, use thermal protection.

Body protection: To protect the body, wear impervious clothing such as coveralls to prevent skin contact with product.

Respiratory protection: If dust is generated, wear NIOSH-approved dust respirator or dust mask. If vapors/dust are generated above exposure limits, use NIOSH approved full-face organic cartridge filter respirator, air supplied respirator or SCBA. Respirators should be selected and used in accordance with OSHA, Subpart 1 (29 CFR 1910.134)

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Solid white powder
Odor:	Odorless
Decomposition Temperature:	No data available
Odor Threshold:	No data available
pH:	5-8.5 (10% slurry)
Initial Boiling Point/Range:	2500 - 3000°C (4532 - 5432°F)
Melting Point/Freezing Point:	Melting point: 1830 -1850°C (3326 - 3362°F)
Flash Point (°C):	No data available
Upper/Lower Flammability or Explosion Limits:	No data available
Relative Density (Specific Gravity):	3.8 - 4.2
Vapor Pressure:	No data available
Vapor Density:	No data available
Bulk Density:	30 -75 lb/ft ³
Solubility:	Insoluble in water
Evaporation Rate:	No data available
Partition Coefficient: (n-octanol/water)	No data available
Flammability (solid/gas):	Product as sold is not flammable.
Auto-ignition Temperature:	No data available
Viscosity:	No data available
Explosive Properties:	No data available

SECTION 10 - STABILITY & REACTIVITY

Reactivity: No specific test data available for this product.

Chemical stability: Material is stable under recommended storage conditions.



Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions are not anticipated.

Conditions to avoid: Avoid generating dust. Avoid excessive heat and exposure to potential ignition sources such as sparks, open flame and/or static discharge.

Incompatible materials: This chemical is incompatible with strong oxidizers and strong acids. Violent or incandescent reactions may occur with metals (e.g. aluminum, calcium, magnesium, potassium, sodium, zinc and lithium. (NTP, 1992).

Hazardous decomposition products: None in normal or expected use.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity: **Oral:** LD50 (Rat): >5000 mg/kg **Inhalation:** No data available

Potential Acute Health Effects:

Eye contact: Eye contact with dust may cause corneal scratching which could result in irritation to eyes such itching, reddening, tearing and burning. Avoid eye contact.

Inhalation: Single exposure to fumes or dust is not expected to cause acute toxicity.

Skin contact: Repeated or prolonged skin contact may cause skin irritation. Avoid skin contact.

Ingestion: Ingestion of large amounts is unlikely. Ingestion of small amounts is not likely to cause acute toxicity.

Potential Chronic Health Effects: Prolonged exposure to dust may lead to respiratory irritation with throat discomfort, coughing or breathing difficulty.

Skin Corrosion/Irritation: Contact with dust can cause mechanical irritation or drying of the skin.

Serious Eye Damage/Irritation: Dust contact with eyes can lead to mechanical irritation.

Respiratory or Skin Sensitization: Non-sensitizing.

Reproductive/Developmental Toxicity: No data available

Carcinogenicity: **IARC:** Group 2B-Possibly carcinogenic to humans.
 NTP 13th Report on Carcinogens:
 -Known to be human carcinogens: Not listed
 -Reasonably anticipated to be human carcinogens: Not Listed

ACGIS TLV: A4 Not classifiable as a human carcinogen.



SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: **Fish:** LC50 (96 hr): >1,000 mg/L (Other fish)
Aquatic Invertebrate: EC50 (48 hr): >1,000 mg/L (Water flea)

Persistence and degradability: Material is practically nonbiodegradable.

Bioaccumulative potential: No data available

Mobility in soil: No data available

Other adverse effects: No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal instructions: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues and must be treated as waste. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14 - TRANSPORTATION INFORMATION

U.S. DOT (Land): Not regulated for transport.

IMO/IMDG (Sea): Not regulated for transport.

IATA/ICAO (Air): Not regulated for transport.

SECTION 15 - REGULATORY INFORMATION

U.S.:

TSCA Inventory Status: This product is listed as Active on the Toxic Substances Control Act Inventory.

Title III SARA Status

SARA Section 302-Extremely Hazardous Substances

SARA Section 311 & 312-Hazardous Categories

SARA Section 313-Toxic Chemicals

None listed

Chronic/Delayed Health hazard

Not regulated



California Proposition 65: Warning! This product contains a chemical known to the State of California to cause cancer. (Titanium dioxide (Airborne, unbound particles of respirable size) –CAS No. 13463-67-7

SECTION 16 - OTHER INFORMATION

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