

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT IDENTIFICATION

Manufacturer/Distributor : Kobo Products, Inc.
Address : 690 Montrose Avenue
South Plainfield, NJ 07080
Emergency Telephone # : (908) 757-0033
Facsimile Number : (908) 757-0905
Trade Name : **TTO-TTB7**
Chemical Name/ Synonyms: Titanium Dioxide (And) Alumina (And) Triethoxysilylethyl Polydimethylsiloxyethyl Methicone
Material Uses : Pigment
Chemical Family : Inorganic Pigment

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient:	CAS #:	EINECS
Titanium Dioxide	13463-67-7	236-675-5
Alumina	1333-84-2	
Triethoxysilylethyl Polydimethylsiloxyethyl Methicone	---	---

SECTION 3: HAZARD IDENTIFICATION

Physical State and Appearance: Solid. (odorless, white powder)

Emergency Overview: May cause respiratory tract, eye and skin irritation.

Routes of Entry: Eye contact. Inhalation. Ingestion (not anticipated).

Potential Acute Health Effects

Eyes: May cause eye irritation. Symptoms include itching and redness after contact.

Skin: May cause mild skin irritation. Symptoms include itching and redness after contact.

Inhalation: May cause respiratory tract irritation. Symptoms include: coughing, wheezing or shortness of breath when inhaled.

Ingestion: Not an intended route of exposure. May be hazardous in case of ingestion. Symptoms include gastrointestinal tract upset and diarrhea.

Potential Chronic Health Effects

Additional information See Toxicological information (section 11)

Medical Conditions Overexposure: Aggravated by Repeated or prolonged inhalation of any dust particulate may aggravate respiratory medical conditions.

SECTION 4: FIRST AID MEASURES

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If symptoms persist, seek medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reusing. Thoroughly clean shoes before reuse. If symptoms develop, seek medical attention.

Inhalation: If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms persist, seek medical attention.

Ingestion: Do not ingest. If this material is swallowed, call a physician immediately. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

Flammability: Non-flammable

Fire Fighting Media And Instructions: In case of fire, use water spray (fog), foam, dry chemical, or CO2

Protective Clothing (fire): Wear self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Small Spill and Leak** : Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional regulatory requirements.
- Large Spill and Leak** : Use appropriate tools to put the spill material into a labeled waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional regulatory requirements. Check TLV in section 8 of MSDS and with local authorities.
- Spill Kit information** : No specific spill kit required for this product.

SECTION 7: HANDLING AND STORAGE

- Handling** : Avoid generating dust. Avoid breathing dust. Use only with adequate ventilation. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Keep container closed. Wash thoroughly after handling.
- Storage** : Keep container dry. Keep containers sealed until ready for use.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Levels: Component	OSHA		ACGIH	
	<u>TWA</u>	<u>PEL</u>	<u>TWA</u>	<u>TLV</u>
TiO ₂	15 mg/m ³		10 mg/m ³	

Personal Protection:**Eye:** Safety glasses with side shields or goggles**Body:** Lab coat**Respiratory:** Use NIOSH/MSHA approved air-purifying respirator as needed to control exposure.**Hand:** Recommended: Gloves**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point (°C)	: N/A	Percent Volatile By Vol. (%)	: N/A
Freezing Point (°C)	: N/A	Vapor Density (Air=1)	: N/A
Melting Point (°C)	: > 1000	Evaporation Rate (Buac=1)	: N/A
Vapor Pressure (mm hg)	: N/A	Solubility In Water	: Insoluble
Bulk Density (g/cbi.)	: N/A	Appearance & Odor	: White Powder with Characteristic Odor

SECTION 10: STABILITY AND REACTIVITY

Stable:	Stable
Hazardous Polymerization:	None
Incompatibility:	None
Hazardous Decomposition Products:	SiO ₂

SECTION 11: TOXICOLOGICAL INFORMATION

<u>Titanium Dioxide*</u>	
Skin Irritation	: Dermal LD ₅₀ > 10 g/kg (Rabbit)
Eye Irritation	: No data

Acute Oral Toxicity : Non-toxic, LD₅₀ > 25 g/kg (rat)Inhalation LC₅₀ : >6.82 mg/L (4 hour)

*: Trochimowicz. et. Al., J. Appl. Tox. 8, 383-385 (1998)

Chronic Effects on Humans **CARCINOGENIC EFFECTS:** Classified None. By NIOSH [Titanium Dioxide]. Classified A4 (not classifiable for human or animal.) by ACGIH, 3 (not classifiable for human.) by IARC [Titanium Dioxide]. Classified None.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
 Repeated or prolonged exposure to the substance at concentrations above exposure limits may cause respiratory damage.
 Target Organs: eyes, lungs, skin.

Acute Effects on Humans May cause skin, eye, and respiratory irritation.

Sensitization Repeated or prolonged exposure to the substance at concentrations above the exposure limits may cause respiratory tract and lung sensitization.

Carcinogenic Effects This material is not known to cause cancer in animals or humans.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity of the Products of Biodegradation: N/A

German Regulations:

Water pollutant class: nwg (own classification)

SECTION 13: DISPOSAL CONSIDERATIONS

EPA Waste Number Non-hazardous waste
Treatment Dispose of according to all federal, state and local regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Classification Not regulated.
TDG Classification Not regulated.
IMO/IMDG Classification Not regulated.
ICAO/IATA Classification Not regulated.

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations Clean Water Act (CWA) 307: No products were found.
 Clean Water Act (CWA) 311: No products were found.
 Clean Air Act (CAA) 112 accidental release prevention: No products were found.
 Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
 Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

WHMIS (Canada) Not controlled under WHMIS (Canada)

International Regulations

DSCL (EEC) S22/25/36- Do not breathe dust, avoid contact with eyes and wear suitable protective clothing.

International List

Australia (NICNAS): TITANIUM DIOXIDE
 JAPAN (MITI): TITANIUM DIOXIDE
 Korea (TCCL): TITANIUM DIOXIDE
 Philippines (RA6969): TITANIUM DIOXIDE

State Regulations Pennsylvania RTK: TITANIUM DIOXIDE: (generic environmental hazard)
 Massachusetts RTK: TITANIUM DIOXIDE

New Jersey: TITANIUM DIOXIDE

SECTION 16: OTHER INFORMATION

Hazardous Material Information System [Ratings Key: 4= Highest hazard, 0= Lowest hazard]
(U.S.A.)

Health	1
Fire Hazard	0
Reactivity	0
Personal Protection	E

EU S phrases : S22/25/36- Do not breathe dust, avoid contact with eyes and wear suitable protective clothing.

Date Prepared : March 5, 2004
Prepared By : Eric Smith

Note:

The statements made here are based upon technical data that Kobo Products Inc. believes to be reliable, are intended to describe the product with regard to necessary safety precautions. They do not guarantee special characteristics. This information is furnished without warranty, expressed or implied, except that it is accurate to the best of our current knowledge.