

MATERIAL SAFETY DATA SHEET
Titanium(IV) oxide

Section 1 - Chemical Product and Company Identification

MSDS Name:	Titanium(IV) oxide
Catalog Numbers:	19434-0000, 19434-0050, 19434-0250, 21358-0000, 21358-0010, 21358-0050, 21358-1000, 27737-0000, 27737-0010, 38429-0000, 38429-0010, 38429-0500, 38429-2500
Synonyms:	Titanium dioxide
Company Identification:	Acros Organics BVBA Janssen Pharmaceuticaaan 3a 2440 Geel, Belgium
Company Identification: (USA)	Acros Organics One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	800-ACROS-01
For information in Europe, call:	+32 14 57 52 11
Emergency Number, Europe:	+32 14 57 52 99
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300
CHEMTREC Phone Number, Europe:	703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
13463-67-7	Titanium(IV) oxide	>98%	236-675-5

Hazard Symbols: XN



Risk Phrases: 40

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Limited evidence of a carcinogenic effect.

Potential Health Effects

- Eye:** Causes mild eye irritation.
- Skin:** Causes mild skin irritation. May be harmful if absorbed through the skin.
- Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed. Ingestion of large amounts may cause pain, constipation or diarrhea. May cause ataxia (failure of muscular coordination), increased blood pressure, hallucinations, hypermotility, muscle contraction/spasticity, fatigue, psychosis, and tremors.
- Inhalation:** May be harmful if inhaled. May cause blood changes. May cause irritation of the upper

respiratory tract and bronchi.

Chronic: Prolonged or repeated exposure may cause lung irritation, chest pain, and pulmonary edema. Limited evidence of a carcinogenic effect.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid. Wash mouth out with water.

Inhalation: Remove from exposure and move to fresh air immediately.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Section 7 - Handling and Storage

Handling: Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place. Keep container closed when not in use.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

CAS# 13463-67-7:

United Kingdom, WEL - TWA: 10 mg/m³ TWA (total inhalable); 4 mg/m³ TWA (respirable) United Kingdom, WEL - STEL: 30 mg/m³ STEL (total inhalable); 12 mg/m³ STEL (respirable)

United States OSHA: 15 mg/m³ TWA (total dust)

Belgium - TWA: 10 mg/m³ VLE

France - VME: 10 mg/m³ VME (as Ti)

Malaysia: 10 mg/m³ TWA

Netherlands: 10 mg/m³ MAC

Russia: 10 mg/m³ TWA (aerosol)

Spain: 10 mg/m³ VLA-ED

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Powder
Color:	white to off-white
Odor:	odorless
pH:	~ 7
Vapor Pressure:	Not available
Viscosity:	Not available
Boiling Point:	2900 deg C @760mmHg (5,252.00°F)
Freezing/Melting Point:	1855 deg C (3,371.00°F)
Autoignition Temperature:	Not available
Flash Point:	Not available
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
Decomposition Temperature:	Not available
Solubility in water:	Insoluble
Specific Gravity/Density:	4.230
Molecular Formula:	O2Ti
Molecular Weight:	79.88

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Incompatible materials.
Incompatibilities with Other Materials	Strong oxidizing agents, strong acids, alkali metals, alkaline earth metals, aluminum, zinc.
Hazardous Decomposition Products	Not available
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 13463-67-7: XR2275000
LD50/LC50:	RTECS: Not available. Other: oral rat LD50 > 10 g/kg oral rat LD50 > 12 g/kg oral rat LD50 > 20 g/kg oral mouse LD50 > 10 g/kg inh rat TCLo = 250 mg/m ³ /6H/2Y inh rat LD > 2.29 mg/L/4H inh rat LD > 3.56 mg/L/4H inh rat LC > 6.82 mg/L skin rabbit LD > 10g/kg skin guinea pig LD50 >= 10 g/kg skin rabbit: not irritating skin rabbit: slightly irritating skin human: low irritancy eye rabbit: not irritating eye rabbit: slightly irritating eye rabbit: mild irritation skin guinea pig: not sensitizing skin human: not sensitizing
Carcinogenicity:	Titanium(IV) oxide - IARC: Group 3 (not classifiable)
Other:	The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information. Mutagenicity: Ames-test: negative. Possible carcinogen.

Section 12 - Ecological Information

Ecotoxicity:	Fish: Leuciscus idus: >=1000 mg/L; 48H; LC0 static Daphnia: Daphnia: 3 mg/L; 30D; EC0 Daphnia: Daphnia: 1000 mg/L; 18D; EC100 Daphnia: Daphnia: 500 mg/L; 30D; EC100
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Section 13 - Disposal Considerations

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

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	Not regulated.	Not regulated.	Not regulated.
Hazard Class:			
UN Number:			
Packing Group:			

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 40 Limited evidence of a carcinogenic effect.

Safety Phrases:

S 36/37 Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)

CAS# 13463-67-7: 0

Canada

CAS# 13463-67-7 is listed on Canada's DSL List

US Federal

TSCA

CAS# 13463-67-7 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 7/16/1996

Revision #3 Date 10/02/2006

Revisions were made in Sections: 2, 3, 9, 11, 14

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