

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Titanium dioxide pure

Revision date: 18.09.2023

Product code: 19309

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Titanium dioxide pure

Substance name: titanium dioxide
REACH Registration Number: 01-2119489379-17-XXXX
CAS No: 13463-67-7
EC No: 236-675-5

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Laboratory chemicals
Industrial uses: Uses of substances as such or in preparations at industrial sites
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
E-mail: info@analytichem.de
Contact person: Abteilung Produktsicherheit
E-mail: produktsicherheit@analytichem.de
Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

Telefax: 0203/5194-290

Telephone: 0203/5194-107/117

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

No data available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This substance is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

2.2. Label elements

Regulation (EC) No 1272/2008

Special labelling of certain mixtures

EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

2.3. Other hazards

Do not breathe dust.
Das in Abschnitt 1.1 genannte Produkt ist gemäß der Verordnung 2020/217 nicht eingestuft.
EUH212 ist in Abschnitt 2.2 auf freiwilliger Basis aufgeführt.

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: TiO₂

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Molecular weight: 79,87 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
13463-67-7	titanium dioxide			100 %
	236-675-5		01-2119489379-17-XXXX	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
13463-67-7	236-675-5	titanium dioxide	100 %
	oral: LD50 = > 2000 mg/kg		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Self-protection of the first aider

After inhalation

Provide fresh air.
Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.
Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.
Call a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No data available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Non-combustible solids

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5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Wear full chemical protective clothing.

Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Collect in closed and suitable containers for disposal.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Keep container tightly closed.
Do not breathe dust.
If handled uncovered, arrangements with local exhaust ventilation have to be used.
Carry out filling operations only at stations with exhaust ventilation facilities.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Wash contaminated clothing prior to re-use.
Avoid contact with skin, eyes and clothes.

Further information on handling

Wash contaminated clothing before reuse.
Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

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Requirements for storage rooms and vessels

Store in a well-ventilated place. Keep container tightly closed.

Hints on joint storage

No data available

Further information on storage conditions

Store in a dry place.

storage temperature: +5°C - +30°C

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
13463-67-7	Titanium dioxide, respirable dust	-	4		TWA (8 h)	

Additional advice on limit values

TitandioxidTRGS 900 STEL CL Einatembare Fraktion. Kategorie II: Resorptiv wirksame Stoffe

Titandioxid TRGS 900 AGW 1,25 mg/m³ Alveolengängige Fraktion

Titandioxid TRGS 900 AGW 10 mg/m³ Einatembare Fraktion. 2 (Überschreitungsfaktor)

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.

Wash hands before breaks and after work.

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Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Filtering device with filter or ventilator filtering device of type: P1

Environmental exposure controls

Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid	
Colour:	white	
Odour:	odourless	
Odour threshold:	No data available	
Melting point/freezing point:		1855 °C
Boiling point or initial boiling point and boiling range:		2900 °C
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		X
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value (at 20 °C):		7-8
Viscosity / kinematic:		No data available
Water solubility:		practically insoluble
Solubility in other solvents		No data available
Dissolution rate:		No data available
Partition coefficient n-octanol/water:		No data available
Dispersion stability:		No data available
Vapour pressure:		No data available
Vapour pressure:		No data available
Density:		No data available
Relative density:		No data available
Bulk density:		~600 kg/m ³
Relative vapour density:		No data available
Particle characteristics:		No data available

9.2. Other information

Information with regard to physical hazard classes

Explosive properties	
No data available	
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available
Oxidizing properties	
No data available	

Other safety characteristics

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	No data available

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Sublimation point: No data available
 Softening point: No data available
 Pour point: No data available
 No data available:
 Viscosity / dynamic: No data available
 Flow time: No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Violent reaction with:
 Alkali metals, Alkaline earth metal, Aluminium (Powdered metals)
 Danger of explosion: Li, Zn (Powdered metals)

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

No data available

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
13463-67-7	titanium dioxide				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1996)	OECD Guideline 401

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

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STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

No data available

Further information

Do not breathe dust.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
13463-67-7	titanium dioxide					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Carassius auratus	REACH Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 > 50 mg/l	72 h	Pseudokirchneriella subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Artemia salina	REACH Registration Dossier	OECD Guideline 202
	Fish toxicity	NOEC >= 80 mg/l	6 d		REACH Registration Dossier	
	Algae toxicity	NOEC >= 1 mg/l	32 d	Synedra ulna, Scenedesmus quadricauda, Stigeocloni	Environ. Tox. Chem. 31, 2414-2422 (2012)	In this study, the authors report the re
	Crustacea toxicity	NOEC > 1 mg/l	10 d	Chironomus riparius	REACH Registration Dossier	other: OECD Guideline 219
	Acute bacteria toxicity	(EC50 > 1000 mg/l)	3 h	activated sludge, domestic	REACH Registration Dossier	OECD Guideline 209

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

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BCF

CAS No	Chemical name	BCF	Species	Source
13463-67-7	titanium dioxide	> 0,47 - < 3,19	Artemia salina	REACH Registration D

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

No data available

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

No data available

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

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ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Water hazard class (D): - - non-hazardous to water

Additional information

No data available

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,7,8,9,11,12,13.

Relevant H and EUH statements (number and full text)

EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.