

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 05-Mar-2024

Revision date 21-Jul-2025

Revision Number 6

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

1.1. Product identifier

Product Code(s)	63718
Safety data sheet number	63718
Product Name	TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER $\geq 10 \mu\text{m}$]
UK REACH registration number	UK-01-7336197506-0-XXXX
Index No	022-006-00-2
EC Number	236-675-5
CAS No	13463-67-7
Synonyms	21007 TITANIUM DIOXIDE 1171, 21007 TITANIUM DIOXIDE 1171 KNS
Pure substance/mixture	Substance
Molecular weight	79.88

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

Recommended use	Colouring agent Pigment Cosmetics Pharmaceuticals Food/Feed additive Coatings Plastics PRINTING INK Paper industry. Catalyst Industrial use
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1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Not classified

2.2. Label elements

Not classified

Hazard statements

Not classified

EUH210 - Safety data sheet available on request

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] 13463-67-7	80 - 100 %	236-675-5 (022-006-00-2)	UK-01-7336197506-0-XXXX	Not classified	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration ≥ 0.1% (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if symptoms occur.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

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

Symptoms

Eyes	Solid particles trapped behind the eyelid may cause abrasive damage,.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	When heated and in case of fire, toxic vapours/gases may be formed. Avoid generation of dust.
Hazardous combustion products	Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid generation of dust.
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Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Pick up and transfer to properly labelled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Do not breathe dust. Avoid generation of dust.

General hygiene considerations Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Take off all contaminated clothing and wash it before reuse. Remove contaminated clothing and protective equipment before entering eating areas. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep in properly labelled containers.

7.3. Specific end use(s)

Specific use(s)

See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	United Kingdom
TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR	TWA: 10 mg/m ³ (total inhalable)

MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] 13463-67-7	TWA: 4 mg/m ³ (respirable)
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Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] 13463-67-7			0.170 mg/m ³ [5] [6]

[5] Local health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] 13463-67-7			0.028 mg/m ³ [5] [6]

[5] Local health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.

Skin and body protection Wear appropriate clothing to prevent reasonably probable skin contact.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Recommended filter type: Particulate filter, type P2.

General hygiene considerations Do not eat, drink or smoke when using the product. Wash hands before breaks and

immediately after handling the product. Take off all contaminated clothing and wash it before reuse. Remove contaminated clothing and protective equipment before entering eating areas. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Powder
Colour	White., to, Yellow
Odour	Odourless.
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	> 1800 °C	
Initial boiling point and boiling range		Not applicable.
Flammability		No information available.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	> 61 °C	
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH	4.0 - 9.0	
pH (as aqueous solution)		No information available.
Kinematic viscosity		No information available.
Dynamic viscosity	600 mPa s	
Water solubility	Insoluble in water	
Solubility(ies)	Insoluble in: Ether	
Partition coefficient		No information available.
Vapour pressure	< 133 Pa	
Relative density	1.01 - 4.2	@ 20 °C.
Bulk density	500 - 900 kg/m ³	
Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		No information available.
Particle Size	466 NM	
Particle Size Distribution	No information available	
Explosive properties	Not considered to be explosive.	
Oxidising properties	No information available	

9.2. Other information

Molecular weight	79.88
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Stable under recommended storage conditions.
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10.2. Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat. Avoid generation of dust.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact Solid particles trapped behind the eyelid may cause abrasive damage,.

Skin contact May cause slight skin irritation.

Ingestion May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER $\geq 10 \mu\text{m}$]	> 5000 mg/kg (Rat)	> 10000mg/kg (Rabbit)	> 6.82 mg/L (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data the classification criteria are not met.

TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			non-irritant

Serious eye damage/eye irritation Based on available data the classification criteria are not met.

TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			non-irritant Solid particles trapped behind the eyelid may cause abrasive damage,

Respiratory or skin sensitisation No information available.

TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] (13463-67-7)

Method	Species	Exposure route	Results
OECD Test No. 429: Skin Sensitization	Mouse	Inhalation Dermal	Not a skin sensitiser
	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity No information available.

Component Information

TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] (13463-67-7)

Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro	Negative
OECD Test No. 476: In Vitro Mammalian Cell Gene Mutation Tests using the Hprt and xprt genes	in vitro	Negative

Carcinogenicity Not Carcinogenic.

Reproductive toxicity Based on available data the classification criteria are not met.

Method	Species	Results
OECD Test No. 414: Pre-natal Development Toxicity Study		Not Classifiable

TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] (13463-67-7)

Method	Species	Results
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		Not classified
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STOT - single exposure

Based on available data the classification criteria are not met.

TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Not classified

STOT - repeated exposure

Based on available data the classification criteria are not met.

Component Information

TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Repeated excessive inhalation exposures to dusts may cause respiratory effects. In animals, effects have been reported on the following organs: Lungs Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

Aspiration hazard

No information available.

Other adverse effects

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

Not considered to be harmful to aquatic life.

TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] (13463-67-7)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Leuciscus idus	NOEC	> 1000 mg/L	48 hours	
	Daphnia magna	EC50	> 1000 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Pseudokirchneriella subcapitata	EC50	> 100 mg/L	72 hours	
OECD Test No. 209: Activated Sludge,	Bacteria	EC50	> 1000 mg/L	3 hours	

Respiration Inhibition Test (Carbon and Ammonium Oxidation)					
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12.2. Persistence and degradability

Persistence and degradability The product contains inorganic substances which are not biodegradable.

TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm] (13463-67-7)

Method	Exposure time	Value	Results
			Not applicable

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

12.4. Mobility in soil

Mobility in soil Insoluble.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
TITANIUM DIOXIDE; [IN POWDER FORM CONTAINING 1 % OR MORE OF PARTICLES WITH AERODYNAMIC DIAMETER ≥ 10 µm]	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).
This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
IECSC	- China Inventory of Existing Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note **SDS sections updated 1 3 4 5 6 7 8 9 10 11 12 14 16**

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method

STOT - single exposure
STOT - repeated exposure
Acute aquatic toxicity
Chronic aquatic toxicity
Aspiration hazard
Ozone

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By Lisa Bland
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**This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical
agents at work**

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet