

**GELEST TITANIUM DIOXIDE TC**

Safety Data Sheet WIA-TCA

Date of issue: 24/10/2014

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Version: 2.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Substance
Physical state : Solid
Substance name : GELEST TITANIUM DIOXIDE TC
Product code : WIA-TCA
Synonyms : C.I. PIGMENT WHITE 6, N-OCTYLTRIETHOXYSILANE
Other means of identification : INCI NAME: TITANIUM DIOXIDE, TRIETHOXYCAPRYLYLSILANE

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Pigment
Cosmetics, personal care products

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**GELEST, INC.**11 East Steel Road
Morrisville, PA 19067**USA**

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info@gelest.com - www.gelest.com**GELEST INC.**Fritz-Klatte-Strasse 8
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T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM

info@gelestde.com - www.gelestde.com**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients**3.1. Substances**

Substance type : Multi-constituent
Name : GELEST TITANIUM DIOXIDE TC
CAS-No. : 13463-67-7
EC-No. : 236-675-5

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Titanium Dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5	98 - 99	Not classified
Triethoxycaprylsilane	(CAS-No.) 2943-75-1 (EC-No.) 220-941-2	1 - 2	Skin Irrit. 2, H315

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash with plenty of water/.... Get medical advice/attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May cause skin irritation.
Symptoms/effects after eye contact	: Direct contact with the eyes is likely to be irritating.
Symptoms/effects after ingestion	: May cause gastrointestinal irritation.
Chronic symptoms	: Possible respiratory damage following repeated or prolonged inhalation.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Non-combustible. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
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6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Minimise generation of dust. Use any suitable mechanical means (vacuum, sweeping etc.). Provide ventilation system and use necessary personal protective equipment as described in "8. EXPOSURE CONTROLS AND PERSONAL PROTECTION". Keep in suitable, closed containers for disposal.
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6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.

Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep in a clean and dry area in original unopened containers.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

GELEST TITANIUM DIOXIDE TC (13463-67-7)		
Ireland	OEL (15 min ref) (mg/m ³)	30 mg/m ³ (calculated-total inhalable dust) 12 mg/m ³ (calculated-respirable dust)
Titanium Dioxide (13463-67-7)		
Austria	MAK (mg/m ³)	5 mg/m ³ (alveolar dust, respirable fraction)
Austria	MAK Short time value (mg/m ³)	10 mg/m ³ (alveolar dust, respirable fraction)
Belgium	Limit value (mg/m ³)	10 mg/m ³
Bulgaria	OEL TWA (mg/m ³)	10 mg/m ³ (respirable dust)
France	VME (mg/m ³)	10 mg/m ³
Greece	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable fraction) 5 mg/m ³ (respirable fraction)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
Latvia	OEL TWA (mg/m ³)	10 mg/m ³
USA IDLH	US IDLH (mg/m ³)	5000 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust)
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Switzerland	MAK (mg/m ³)	3 mg/m ³ (respirable dust)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ (total inhalable) 4 mg/m ³ (respirable)
United Kingdom	WEL STEL (mg/m ³)	30 mg/m ³ (calculated-total inhalable) 12 mg/m ³ (calculated-respirable)
Denmark	Grænseværdie (langvarig) (mg/m ³)	6 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³ (total inhalable dust) 4 mg/m ³ (respirable dust)
Ireland	OEL (15 min ref) (mg/m ³)	30 mg/m ³ (calculated-total inhalable dust) 12 mg/m ³ (calculated-respirable dust)
Lithuania	IPRV (mg/m ³)	5 mg/m ³
Norway	Grænseverdier (AN) (mg/m ³)	5 mg/m ³
Norway	Grænseverdier (Korttidsverdi) (mg/m ³)	5 mg/m ³
Poland	NDS (mg/m ³)	10 mg/m ³ (<2% free crystalline silica and containing no asbestos-inhalable fraction)
Romania	OEL TWA (mg/m ³)	10 mg/m ³
Romania	OEL STEL (mg/m ³)	15 mg/m ³
Sweden	nivågränsvärde (NVG) (mg/m ³)	5 mg/m ³ (total dust)
Canada (Quebec)	VEMP (mg/m ³)	10 mg/m ³ (containing no Asbestos and <1% Crystalline silica-total dust)
Australia	TWA (mg/m ³)	10 mg/m ³ (containing no asbestos and <1% crystalline silica-inhalable dust)
Portugal	OEL TWA (mg/m ³)	10 mg/m ³
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human Carcinogen

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8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: White.
Odour	: Slight. characteristic.
Odour threshold	: No data available
Refractive index	: No additional information available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: > 1800 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 3.9
Solubility	: Insoluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

No additional information available

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10.4. Conditions to avoid

Avoid dust formation.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Titanium Dioxide (13463-67-7)

LD50 oral rat	> 10000 mg/kg
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Triethoxycaprylsilane (2943-75-1)

LD50 oral rat	> 5110 mg/kg
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Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified (Lack of data. Inconclusive data)

In 2006, the International Agency for Research of Cancer (IARC) classified titanium dioxide as "possibly carcinogenic" to humans (Group 2B). The IARC Working Group concluded there was sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide, however, IARC found little evidence of an increased risk for cancer among humans based on epidemiological study data.

GELEST TITANIUM DIOXIDE TC (13463-67-7)

IARC group	2B - Possibly carcinogenic to humans
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Titanium Dioxide (13463-67-7)

IARC group	2B - Possibly carcinogenic to humans
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Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : May cause skin irritation.
Symptoms/effects after eye contact : Direct contact with the eyes is likely to be irritating.
Symptoms/effects after ingestion : May cause gastrointestinal irritation.
Chronic symptoms : Possible respiratory damage following repeated or prolonged inhalation.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations	: Dry material can be landfilled. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

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- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

GELEST TITANIUM DIOXIDE TC is not on the REACH Candidate List

GELEST TITANIUM DIOXIDE TC is not on the REACH Annex XIV List

GELEST TITANIUM DIOXIDE TC is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

GELEST TITANIUM DIOXIDE TC is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) nwg, Non-hazardous to water (KBwS-Beschluss; ID No. 1345)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor
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Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation.
EUH210	Safety data sheet available on request.

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SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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