

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519



## Ti-Pure™ R-746 Titanium Dioxide Slurry

Version 3.1      Revision Date: 2025/07/21      SDS Number: 11256432-00006      Date of last issue: 2025/03/21  
Date of first issue: 2023/08/08

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ti-Pure™ R-746 Titanium Dioxide Slurry  
SDS-Identcode : 130000143110

#### Manufacturer or supplier's details

Company : The Chemours Chemical (Shanghai) Co., Ltd.  
Address : 9F, SCG Parkside, 868 Yinghua Road, Pudong New District  
201204, Shanghai, China  
Telephone : 86 400 8056 528  
Emergency telephone number : 86 532 8388 9090  
E-mail address : SDS.ChinaPSR@chemours.com  
Telefax : 86 21 2612 0862

#### Recommended use of the chemical and restrictions on use

Recommended use : Colouring agent  
Pigment  
Restrictions on use : For industrial use only.

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

Appearance : liquid  
Colour : white  
Odour : amine-like

May cause an allergic skin reaction.

#### GHS Classification

Skin sensitisation : Category 1

#### GHS label elements

Hazard pictograms : 

Signal word : Warning

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Hazard statements : H317 May cause an allergic skin reaction.

Precautionary statements : **Prevention:**  
P261 Avoid breathing mist or vapours.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves.

**Response:**  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P333 + P317 If skin irritation or rash occurs: Get medical help.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Physical and chemical hazards

Not classified based on available information.

### Health hazards

May cause an allergic skin reaction.

### Environmental hazards

Not classified based on available information.

### Other hazards which do not result in classification

None known.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
Titanium dioxide	13463-67-7	>= 70 -< 90
Silicon dioxide, amorphous#	7631-86-9	>= 1 -< 10
Aluminium hydroxide	21645-51-2	>= 1 -< 10
Trimethylolpropane	77-99-6	>= 0.1 -< 1
2-Methyl-2H-isothiazol-3-one	2682-20-4	>= 0.0025 -< 0.025
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	>= 0.0015 -< 0.0025

# Voluntarily-disclosed substance

### Alternative CAS Numbers for some regions

Chemical name	Alternative CAS Number(s)
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Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	2682-20-4, 26172-55-4
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### 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.  
Remove contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention.  
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : irritant effects  
May cause an allergic skin reaction.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

### 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : None known.

Specific hazards during fire- : Exposure to combustion products may be a hazard to health.



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fighting

Hazardous combustion products : Metal oxides

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 7. HANDLING AND STORAGE

#### Handling



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- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Do not get on skin or clothing.  
Avoid breathing mist or vapours.  
Do not swallow.  
Avoid contact with eyes.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Take care to prevent spills, waste and minimize release to the environment.
- Avoidance of contact : None.

### Storage

- Conditions for safe storage : Keep in properly labelled containers.  
Store in accordance with the particular national regulations.
- Materials to avoid : No special restrictions on storage with other products.
- Further information on storage stability : Do not freeze.
- Packaging material : Unsuitable material: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Titanium dioxide	13463-67-7	PC-TWA (Total dust)	8 mg/m <sup>3</sup>	CN OEL
Further information: G2B - Possibly carcinogenic to humans				
		TWA (Respirable particulate matter)	2.5 mg/m <sup>3</sup> (Titanium dioxide)	ACGIH
Aluminium hydroxide	21645-51-2	TWA (Respirable particulate matter)	1 mg/m <sup>3</sup> (Aluminium)	ACGIH

- Engineering measures : Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

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### Personal protective equipment

- Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
- Filter type : Particulates type
- Eye/face protection : Wear the following personal protective equipment:  
Safety glasses
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
- Hand protection
- Material : Chemical-resistant gloves
- Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.  
When using do not eat, drink or smoke.  
Contaminated work clothing should not be allowed out of the workplace.  
Wash contaminated clothing before re-use.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Colour : white
- Odour : amine-like



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Odour Threshold : No data available

pH : 7.0 - 10.5

Melting point/freezing point : 0 °C

Initial boiling point and boiling range : 100 °C

Flash point : does not flash

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Not applicable

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 1.8 - 2.4

Solubility(ies)  
Water solubility : dispersible

Partition coefficient: n-octanol/water : Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : The substance or mixture is not classified self-reactive.

Viscosity  
Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle characteristics  
Particle size : Not applicable



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### 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : None known.

Conditions to avoid : None known.

Incompatible materials : None.

Hazardous decomposition products : No hazardous decomposition products are known.

### 11. TOXICOLOGICAL INFORMATION

Exposure routes : Inhalation  
Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Components:

##### Titanium dioxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat): > 6.82 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Acute toxicity estimate (Rat): > 2,000 mg/kg  
Method: Expert judgement  
Assessment: The substance or mixture has no acute dermal toxicity

##### Silicon dioxide, amorphous:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 2.08 mg/l



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Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

### Aluminium hydroxide:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 423  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 5.09 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Based on data from similar materials

### Trimethylolpropane:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.85 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

### 2-Methyl-2H-isothiazol-3-one:

Acute oral toxicity : LD50 (Rat): 120 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.11 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rat): 242 mg/kg  
Method: OECD Test Guideline 402

### Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Acute oral toxicity : LD50 (Rat): 64 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.171 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist



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Assessment: Corrosive to the respiratory tract.

Acute dermal toxicity : LD50 (Rabbit): 87.12 mg/kg

### Skin corrosion/irritation

Not classified based on available information.

### Components:

#### Titanium dioxide:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

#### Silicon dioxide, amorphous:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

#### Aluminium hydroxide:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

#### Trimethylolpropane:

Species : Rabbit  
Result : No skin irritation

#### 2-Methyl-2H-isothiazol-3-one:

Result : Corrosive after 3 minutes to 1 hour of exposure

#### Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Corrosive after 1 to 4 hours of exposure

### Serious eye damage/eye irritation

Not classified based on available information.

### Components:

#### Titanium dioxide:

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405



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### Silicon dioxide, amorphous:

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405

### Aluminium hydroxide:

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405

### Trimethylolpropane:

Species : Rabbit  
Result : No eye irritation

### 2-Methyl-2H-isothiazol-3-one:

Result : Irreversible effects on the eye

### Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Result : Irreversible effects on the eye  
Remarks : Based on skin corrosivity.

### Respiratory or skin sensitisation

#### Skin sensitisation

May cause an allergic skin reaction.

#### Respiratory sensitisation

Not classified based on available information.

### Components:

#### Titanium dioxide:

Test Type : Buehler Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : negative

Exposure routes : Inhalation  
Species : Mouse  
Result : negative



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Exposure routes : Inhalation  
Species : Humans  
Result : negative

### Aluminium hydroxide:

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

### Trimethylolpropane:

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : negative

### 2-Methyl-2H-isothiazol-3-one:

Exposure routes : Skin contact  
Result : positive

Assessment : Probability or evidence of high skin sensitisation rate in humans

### Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Test Type : Buehler Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Result : positive

Assessment : Probability or evidence of high skin sensitisation rate in humans

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### Titanium dioxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476



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- Result: negative
- Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative
- Test Type: comet assay  
Method: OPPTS 870.5140  
Result: positive
- Genotoxicity in vivo : Test Type: In vivo mammalian alkaline comet assay  
Species: Rat  
Application Route: intratracheal  
Method: OECD Test Guideline 489  
Result: negative
- Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative
- Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 475  
Result: negative
- Test Type: Transgenic rodent germ cell gene mutation assay  
Species: Mouse  
Application Route: Intravenous injection  
Method: OECD Test Guideline 488  
Result: negative
- Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.
- Silicon dioxide, amorphous:**
- Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative
- Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: Ingestion  
Result: negative
- Germ cell mutagenicity - : Weight of evidence does not support classification as a germ



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Assessment cell mutagen.

### Aluminium hydroxide:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: positive  
Remarks: Based on data from similar materials

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)  
Result: equivocal  
Remarks: Based on data from similar materials

Test Type: in vitro micronucleus test  
Result: positive  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
Result: negative

### Trimethylolpropane:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

### 2-Methyl-2H-isothiazol-3-one:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 486  
Result: negative

### Carcinogenicity

Not classified based on available information.

### Product:

Remarks : In lifetime inhalation studies rats were exposed for 2 years to respectively 10, 50 and 250 mg/m<sup>3</sup> of respirable TiO<sub>2</sub>. Slight



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lung fibrosis was observed at 50 and 250 mg/m<sup>3</sup> levels. Microscopic lung tumours were also observed in 13 percent of the rats exposed to 250 mg/m<sup>3</sup>, an exposure level that caused lung overloading and impairment of rat lungs clearance mechanisms.

In further studies, these tumours were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. The pulmonary inflammatory response to TiO<sub>2</sub> particles exposure was also found to be much more severe in rats than in other rodent species.

In February 2006, IARC has re-evaluated Titanium dioxide as pertaining to Group 2B: "possibly carcinogenic to humans", based upon inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide. IARC evaluation guidelines consider the generation of tumours, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence.

The conclusions of several epidemiology studies on more than 20000 TiO<sub>2</sub> industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO<sub>2</sub> dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO<sub>2</sub> dust.

Based upon all available study results, Chemours scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.

### Components:

#### **Titanium dioxide:**

Species : Rat  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 2 Years  
Result : negative

Species : Rat  
Application Route : Ingestion  
Exposure time : 105 weeks  
Result : negative

Species : Mouse  
Application Route : Ingestion  
Exposure time : 103 weeks  
Result : negative

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen



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### Silicon dioxide, amorphous:

Species : Rat  
Application Route : Ingestion  
Exposure time : 103 weeks  
Result : negative

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

### Aluminium hydroxide:

Species : Rat  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 86 weeks  
Result : negative  
Remarks : Based on data from similar materials

### Reproductive toxicity

Not classified based on available information.

### Components:

#### Titanium dioxide:

Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 443  
Result: negative

Effects on foetal development : Test Type: Prenatal development toxicity study (teratogenicity)  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

#### Silicon dioxide, amorphous:

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

#### Aluminium hydroxide:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the



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reproduction/developmental toxicity screening test

Species: Rat

Application Route: Ingestion

Method: OECD Test Guideline 422

Result: negative

Remarks: Based on data from similar materials

Effects on foetal development

: Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Result: negative

### Trimethylolpropane:

Effects on fertility

: Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: positive

Effects on foetal development

: Species: Rat

Application Route: Ingestion

Method: OECD Test Guideline 443

Result: positive

Reproductive toxicity - Assessment

: Some evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of adverse effects on development, based on animal experiments.

### 2-Methyl-2H-isothiazol-3-one:

Effects on fertility

: Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Method: OECD Test Guideline 416

Result: negative

Effects on foetal development

: Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Method: OECD Test Guideline 414

Result: negative

### STOT - single exposure

Not classified based on available information.

### Components:

#### Titanium dioxide:

Exposure routes

: Skin contact

Assessment

: No significant health effects observed in animals at concentrations of 2000 mg/kg bw or less

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## Ti-Pure™ R-746 Titanium Dioxide Slurry

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Exposure routes : Ingestion  
Assessment : No significant health effects observed in animals at concentrations of 2000 mg/kg bw or less

Exposure routes : inhalation (dust/mist/fume)  
Assessment : No significant health effects observed in animals at concentrations of 5.0 mg/l/4h or less

### STOT - repeated exposure

Not classified based on available information.

#### Components:

##### **Titanium dioxide:**

Exposure routes : Ingestion  
Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Exposure routes : inhalation (dust/mist/fume)  
Assessment : No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Exposure routes : Ingestion  
Assessment : No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.

### Repeated dose toxicity

#### Components:

##### **Titanium dioxide:**

Species : Rat, male and female  
NOAEL : 24,000 mg/kg  
LOAEL : > 24,000 mg/kg  
Application Route : Ingestion  
Exposure time : 28 Days  
Method : OECD Test Guideline 407  
Remarks : No significant adverse effects were reported

Species : Rat, male and female  
NOAEL : 0.01 mg/l  
LOAEL : 0.5 mg/l  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 24 Months  
Method : OECD Test Guideline 453  
Remarks : No significant adverse effects were reported

Species : Rat, male and female  
NOAEL : 962 mg/kg  
LOAEL : > 962 mg/kg



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Application Route : Ingestion  
Exposure time : 90 Days  
Method : OECD Test Guideline 408  
Remarks : No significant adverse effects were reported

### Silicon dioxide, amorphous:

Species : Rat  
NOAEL : 1.3 mg/m<sup>3</sup>  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 13 Weeks

### Aluminium hydroxide:

Species : Rat  
NOAEL : > 100 mg/kg  
Application Route : Ingestion  
Exposure time : 364 Days  
Method : OECD Test Guideline 426  
Remarks : Based on data from similar materials

Species : Rat  
NOAEL : > 0.2 mg/kg  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 12 Months  
Remarks : Based on data from similar materials

### Trimethylolpropane:

Species : Rat  
NOAEL : 67 mg/kg  
Application Route : Ingestion  
Exposure time : 90 Days

### Aspiration toxicity

Not classified based on available information.

### Components:

#### Titanium dioxide:

No aspiration toxicity classification

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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

#### Titanium dioxide:

Toxicity to fish : LC50 (Fish): > 1,000 mg/l  
Exposure time: 96 h



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Method: OECD Test Guideline 203

LC50 (Marine species): > 10,000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia sp. (water flea)): > 1,000 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

EC50 (No species specified): > 1,000 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l  
Exposure time: 72 h  
Method: ISO 10253

NOEC (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 3 d  
Method: OECD Test Guideline 201

NOEC (Skeletonema costatum (marine diatom)): 5,600 mg/l  
Exposure time: 3 d  
Method: ISO 10253

### Silicon dioxide, amorphous:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 10,000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l  
Exposure time: 24 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): 10,000 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201



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Remarks: Based on data from similar materials

### Aluminium hydroxide:

- Toxicity to fish : LL50 (Salmo trutta (brown trout)): > 100 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : EL50 (Selenastrum capricornutum (green algae)): > 100 mg/l  
Exposure time: 96 h

### Trimethylolpropane:

- Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): > 1,000 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 13,000 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l  
Exposure time: 72 h
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 1,000 mg/l  
Exposure time: 21 d
- Toxicity to microorganisms : EC50: > 1,000 mg/l  
Exposure time: 3 h

### 2-Methyl-2H-isothiazol-3-one:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.77 - 6 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.93 - 1.9 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : ErC50 (Skeletonema costatum (marine diatom)): 0.1 mg/l  
Exposure time: 72 h
- ErC50 (Skeletonema costatum (marine diatom)): 0.0695 mg/l  
Exposure time: 24 h
- EC10 (Pseudokirchneriella subcapitata (green algae)): 0.024 mg/l  
Exposure time: 24 h

M-Factor (Acute aquatic toxicity) : 10



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Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 2.1 mg/l  
Exposure time: 33 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.04 mg/l  
Exposure time: 21 d

M-Factor (Chronic aquatic toxicity) : 1

### Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.19 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.16 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Skeletonema costatum (marine diatom)): 0.0052 mg/l  
Exposure time: 48 h

NOEC (Skeletonema costatum (marine diatom)): 0.00049 mg/l  
Exposure time: 48 h

M-Factor (Acute aquatic toxicity) : 100

Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.02 mg/l  
Exposure time: 36 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.10 mg/l  
Exposure time: 21 d

M-Factor (Chronic aquatic toxicity) : 100

### Persistence and degradability

#### Components:

##### Trimethylolpropane:

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 6 %  
Exposure time: 28 d

##### 2-Methyl-2H-isothiazol-3-one:

Biodegradability : Result: Not readily biodegradable.



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### Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 62 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

### Bioaccumulative potential

#### Components:

##### Titanium dioxide:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)  
Bioconcentration factor (BCF): 352

##### Trimethylolpropane:

Partition coefficient: n-octanol/water : log Pow: -0.47

##### 2-Methyl-2H-isothiazol-3-one:

Partition coefficient: n-octanol/water : log Pow: -0.34

### Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1):

Partition coefficient: n-octanol/water : log Pow: < 1

### Mobility in soil

No data available

### Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.



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### 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Environmentally hazardous : no

##### IATA-DGR

UN/ID No. : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Packing instruction (cargo aircraft) : Not applicable  
Packing instruction (passenger aircraft) : Not applicable

##### IMDG-Code

UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
EmS Code : Not applicable  
Marine pollutant : no

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### National Regulations

##### GB 6944/12268

UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Marine pollutant : no

#### Special precautions for user

Not applicable



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### 15. REGULATORY INFORMATION

#### National regulatory information

##### Law on the Prevention and Control of Occupational Diseases

##### Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : This product is not listed in the catalogue of hazardous chemicals, but it meets the definition of hazardous chemicals and its principles of determination.

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218) : Not listed

Hazardous Chemicals for Priority Management under SAWS : Not listed

Catalogue of Specially Controlled Hazardous Chemicals : Listed

List of Explosive Precursors : Listed

##### Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals : Not listed

##### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export : Not listed

##### Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals : Not listed

##### Yangtze River Protection Law

This product does not contain any dangerous chemicals prohibited for inland river transport.

##### Regulations of Ozone Depleting Substances Management

List of Controlled Ozone Depleting Substances Import and Export : Not listed

List of Controlled Ozone Depleting Substances : Not listed

##### Environmental Protection Law

List of Priority Controlled Chemicals : Not listed

List of Key Controlled New Pollutants : Not listed



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### 16. OTHER INFORMATION

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Other information : Ti-Pure™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC. Chemours™ and the Chemours Logo are trademarks of The Chemours Company. Before use read Chemours safety information. For further information contact the local Chemours office or nominated distributors. These products may not be directly added to food, pharmaceuticals, cosmetics, or cigarette papers/filters for tobacco products. Do not use or resell Chemours™ materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless agreed to by Seller in a written agreement covering such use. For further information, please contact your Chemours representative.

#### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : yyyy/mm/dd

#### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
CN OEL : Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

ACGIH / TWA : 8-hour, time-weighted average  
CN OEL / PC-TWA : Permissible concentration - time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median

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Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECL - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

### 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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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