

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519



## Ti-Pure™ R-900 Titanium Dioxide Pigment

|         |                |               |                                 |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number:   | Date of last issue: 2025/05/23  |
| 6.0     | 2025/10/29     | 1575690-00020 | Date of first issue: 2017/04/26 |

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ti-Pure™ R-900 Titanium Dioxide Pigment

SDS-Identcode : 130000030873

#### 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 | : solid     |
| Colour     | : white     |
| Odour      | : odourless |

Not a hazardous substance or mixture.

#### GHS Classification

Not a hazardous substance or mixture.

#### GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

#### Physical and chemical hazards

Not classified based on available information.

#### Health hazards

Not classified based on available information.

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### 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 | $\geq 90$ - $\leq 100$ |
| Aluminium hydroxide         | 21645-51-2 | $\geq 1$ - $< 10$      |
| Silicon dioxide, amorphous# | 7631-86-9  | $< 0.1$                |

# Voluntarily-disclosed substance

## 4. FIRST AID MEASURES

|                                                             |                                                                                                                           |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| If inhaled                                                  | : If inhaled, remove to fresh air.<br>Get medical attention if symptoms occur.                                            |
| In case of skin contact                                     | : Wash with water and soap as a precaution.<br>Get medical attention if symptoms occur.                                   |
| In case of eye contact                                      | : Flush eyes with water as a precaution.<br>Get medical attention if irritation develops and persists.                    |
| If swallowed                                                | : If swallowed, DO NOT induce vomiting.<br>Get medical attention if symptoms occur.<br>Rinse mouth thoroughly with water. |
| Most important symptoms and effects, both acute and delayed | : irritant effects                                                                                                        |
| Protection of first-aiders                                  | : No special precautions are necessary for first aid responders.                                                          |
| Notes to physician                                          | : Treat symptomatically and supportively.                                                                                 |

## 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Not applicable  
Will not burn

Unsuitable extinguishing media : Not applicable  
Will not burn

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 : Wear self-contained breathing apparatus for firefighting if necessary.  
Use personal protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : 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.  
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 : Sweep up or vacuum up spillage and collect in suitable container for disposal.  
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

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

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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.

Packaging material : Unsuitable material: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

| Components                                                 | CAS-No.    | Value type<br>(Form of exposure)    | Control parameters / Permissible concentration | Basis  |
|------------------------------------------------------------|------------|-------------------------------------|------------------------------------------------|--------|
| Titanium dioxide                                           | 13463-67-7 | PC-TWA<br>(Total dust)              | 8 mg/m3                                        | CN OEL |
| Further information: G2B - Possibly carcinogenic to humans |            |                                     |                                                |        |
|                                                            |            | TWA (Respirable particulate matter) | 2.5 mg/m3<br>(Titanium dioxide)                | ACGIH  |
| Aluminium hydroxide                                        | 21645-51-2 | TWA (Respirable particulate matter) | 1 mg/m3<br>(Aluminium)                         | ACGIH  |

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

### 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 : Skin should be washed after contact.

Hand protection

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|                  |                                                                                                                                                                                                                            |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Remarks          | : 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.<br>When using do not eat, drink or smoke.<br>Wash contaminated clothing before re-use. |

### 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                                  |                                                                      |
|--------------------------------------------------|----------------------------------------------------------------------|
| Appearance                                       | : solid                                                              |
| Colour                                           | : white                                                              |
| Odour                                            | : odourless                                                          |
| Odour Threshold                                  | : No data available                                                  |
| pH                                               | : No data available                                                  |
| Melting point/freezing point                     | : 1,843 °C                                                           |
| Initial boiling point and boiling range          | : 3,000 °C                                                           |
| Flash point                                      | : Not applicable                                                     |
| Evaporation rate                                 | : Not applicable                                                     |
| Flammability (solid, gas)                        | : Will not burn<br>Not expected to form explosive dust-air mixtures. |
| Upper explosion limit / Upper flammability limit | : No data available                                                  |
| Lower explosion limit / Lower flammability limit | : No data available                                                  |
| Vapour pressure                                  | : Not applicable                                                     |
| Relative vapour density                          | : Not applicable                                                     |
| Relative density                                 | : 3.4 - 4.3                                                          |
| Density                                          | : 4.050 g/cm <sup>3</sup>                                            |
| Solubility(ies)                                  |                                                                      |

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|                                        |   |                                                           |
|----------------------------------------|---|-----------------------------------------------------------|
| Water solubility                       | : | insoluble                                                 |
| 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                   | : | Not applicable                                            |
| Explosive properties                   | : | Not explosive                                             |
| Oxidizing properties                   | : | The substance or mixture is not classified as oxidizing.  |
| Particle characteristics               | : |                                                           |
| Particle size                          | : | No data available                                         |

### 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 | : | Skin contact<br>Ingestion<br>Eye contact |
|-----------------|---|------------------------------------------|

#### Acute toxicity

Not classified based on available information.

#### Components:

##### Titanium dioxide:

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

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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

### 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

### 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  
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

### Skin corrosion/irritation

Not classified based on available information.

### Components:

#### Titanium dioxide:

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

#### Aluminium hydroxide:

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

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### Silicon dioxide, amorphous:

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

### 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 |

#### Aluminium hydroxide:

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

### Silicon dioxide, amorphous:

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

### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### 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                |

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### Titanium dioxide:

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Genotoxicity in vitro | : Test Type: Bacterial reverse mutation assay (AMES)<br>Method: OECD Test Guideline 471<br>Result: negative<br><br>Test Type: In vitro mammalian cell gene mutation test<br>Method: OECD Test Guideline 476<br>Result: negative<br><br>Test Type: Chromosome aberration test in vitro<br>Method: OECD Test Guideline 473<br>Result: negative<br><br>Test Type: comet assay<br>Method: OPPTS 870.5140<br>Result: positive                                                                                                                                               |
| Genotoxicity in vivo  | : Test Type: In vivo mammalian alkaline comet assay<br>Species: Rat<br>Application Route: intratracheal<br>Method: OECD Test Guideline 489<br>Result: negative<br><br>Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 474<br>Result: negative<br><br>Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)<br>Species: Mouse<br>Application Route: Intraperitoneal injection<br>Method: OECD Test Guideline 475 |

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|                                     |                                                                              |
|-------------------------------------|------------------------------------------------------------------------------|
|                                     | 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. |

### 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                                                                          |

### 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 - Assessment | : Weight of evidence does not support classification as a germ cell mutagen.                     |

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### 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 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  |

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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

### 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

### 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

### Aluminium hydroxide:

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

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ment

Species: Rat  
Application Route: Ingestion  
Result: negative

### 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

### STOT - single exposure

Not classified based on available information.

### Components:

#### Titanium dioxide:

Exposure routes  
Assessment

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

Exposure routes  
Assessment

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

Exposure routes  
Assessment

: inhalation (dust/mist/fume)  
: 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  
Assessment

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

Exposure routes  
Assessment

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

Exposure routes  
Assessment

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



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

##### **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 |

##### **Silicon dioxide, amorphous:**

|                   |                               |
|-------------------|-------------------------------|
| Species           | : Rat                         |
| NOAEL             | : 1.3 mg/m3                   |
| Application Route | : inhalation (dust/mist/fume) |
| Exposure time     | : 13 Weeks                    |

### Aspiration toxicity

Not classified based on available information.



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### Components:

#### **Titanium dioxide:**

|| No aspiration toxicity classification

## 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### Components:

#### **Titanium dioxide:**

|                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                    | : LC50 (Fish): > 1,000 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203<br><br>LC50 (Marine species): > 10,000 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203                                                                                                                                                                                                                                                                                            |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia sp. (water flea)): > 1,000 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202<br><br>EC50 (No species specified): > 1,000 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202                                                                                                                                                                                                                                                                   |
| Toxicity to algae/aquatic plants                    | : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br><br>EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l<br>Exposure time: 72 h<br>Method: ISO 10253<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l<br>Exposure time: 3 d<br>Method: OECD Test Guideline 201<br><br>NOEC (Skeletonema costatum (marine diatom)): 5,600 mg/l<br>Exposure time: 3 d<br>Method: ISO 10253 |

#### **Aluminium hydroxide:**

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| Toxicity to fish              | : LL50 (Salmo trutta (brown trout)): > 100 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other | : EL50 (Daphnia magna (Water flea)): > 100 mg/l                        |

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|                                  |                                                                                     |
|----------------------------------|-------------------------------------------------------------------------------------|
| aquatic invertebrates            | Exposure time: 48 h                                                                 |
| Toxicity to algae/aquatic plants | : EL50 (Selenastrum capricornutum (green algae)): > 100 mg/l<br>Exposure time: 96 h |

### Silicon dioxide, amorphous:

|                                                     |                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                    | : LC50 (Danio rerio (zebra fish)): > 10,000 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203                                                                                                                                                                                                                                           |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l<br>Exposure time: 24 h<br>Method: OECD Test Guideline 202                                                                                                                                                                                                                                          |
| Toxicity to algae/aquatic plants                    | : EC50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br><br>NOEC (Desmodesmus subspicatus (green algae)): 10,000 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |

### Persistence and degradability

No data available

### Bioaccumulative potential

#### Components:

#### Titanium dioxide:

|                 |                                                                                      |
|-----------------|--------------------------------------------------------------------------------------|
| Bioaccumulation | : Species: Oncorhynchus mykiss (rainbow trout)<br>Bioconcentration factor (BCF): 352 |
|-----------------|--------------------------------------------------------------------------------------|

### 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.<br><br>Dispose of in accordance with local regulations. |
|---------------------|-----------------------------------------------------------------------------------------------|

|                        |                                                              |
|------------------------|--------------------------------------------------------------|
| Contaminated packaging | : Empty containers should be taken to an approved waste han- |
|------------------------|--------------------------------------------------------------|

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ding site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

Not regulated as a dangerous good

|                           |                  |
|---------------------------|------------------|
| 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

Not regulated as a dangerous good

|                                          |                  |
|------------------------------------------|------------------|
| 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

Not regulated as a dangerous good

|                      |                  |
|----------------------|------------------|
| 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

Not regulated as a dangerous good

|                      |                  |
|----------------------|------------------|
| UN number            | : Not applicable |
| Proper shipping name | : Not applicable |
| Class                | : Not applicable |
| Subsidiary risk      | : Not applicable |
| Packing group        | : Not applicable |
| Labels               | : Not applicable |

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Marine pollutant : no

### Special precautions for user

Not applicable

## 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 and it does not meet 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 : Not listed

List of Explosive Precursors : Not 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

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List of Key Controlled New Pollutants : Not listed

List of Toxic and Hazardous Water Pollutants : Not listed

List of Toxic and Hazardous Air Pollutants : Not listed

List of Toxic and Hazardous Soil Pollutants : Not listed

### Measures for the Administration of Non-Medical Use of Narcotic Drugs and Psychotropic Substances

Catalogue of Controlled Narcotic Drugs and Psychotropic Substances with Non-Medical Use : Not listed

### Measures for the Administration on Import and Export Licenses for Dual-Use Items and Technologies

Catalogue for Dual-Use Items and Technologies : Not listed

## 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. In the manufacture of titanium dioxide, product is packaged at temperatures of approximately 100 to 120°C (212 to 248°F). When pigment is shipped shortly after manufacture, it may stay hot for a very long time depending on ambient temperatures and inventory storage practices. Use caution while handling hot pigment to prevent burns to personnel. Use caution in solvent applications to prevent ignition of solvent.

### 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/>



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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods; 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 - Organisation 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; TECI - 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.

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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.

CN / EN

