

SAFETY DATA SHEET



Ti-Pure™ R-103 Titanium Dioxide Pigment

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|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: 03.05.2024 |
| 2.7 | 17.10.2024 | 1575809-00017 | Date of first issue: 27.04.2017 |

Section 1: Identification

Product identifier : Ti-Pure™ R-103 Titanium Dioxide Pigment

SDS-Identcode : 130000030905

Recommended use of the chemical and restrictions on use

Recommended use : Colouring agent
Pigment

Restrictions on use : For industrial use only.

Manufacturer or supplier's details

Company : The Chemours Company Singapore PTE. LTD.

Address : 1 HarbourFront Place, #16-01 HarbourFront Tower One
Singapore 098633

Telephone : 65-6715-8688

Emergency telephone number : 1800 315 8134

Telefax : 65-6715-8697

Section 2: Hazard identification

Classification of the substance or mixture

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

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

Other hazards which do not result in classification

None known.

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

Components

| Chemical name | CAS-No. | Concentration (% w/w) |
|---------------------|------------|------------------------|
| Titanium dioxide | 13463-67-7 | ≥ 90 - ≤ 100 |
| Aluminium hydroxide | 21645-51-2 | ≥ 1 - < 10 |
| Trimethylolpropane | 77-99-6 | ≥ 0.1 - < 1 |

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Section 4: First-aid measures

Description of necessary 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

- | | |
|----------------------------|---|
| Risks | : irritant effects |
| 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). |

Indication of any immediate medical attention and special treatment needed

- | | |
|-----------|---|
| Treatment | : Treat symptomatically and supportively. |
|-----------|---|
-

Section 5: Fire-fighting measures

Extinguishing media

- | | |
|--------------------------------|-----------------------------------|
| Suitable extinguishing media | : Not applicable Will not burn |
| Unsuitable extinguishing media | : Not applicable Will not burn |

Special hazards arising from the substance or mixture

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

Hazardous combustion products : Metal oxides

Special protective actions for fire-fighters

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

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.

Section 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

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

Environmental precautions

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

Methods for 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.

Section 7: Handling and storage**Precautions for safe handling**

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

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- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Do not swallow.
Avoid contact with eyes.
Avoid prolonged or repeated contact with skin.
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.
- 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.
Wash contaminated clothing before re-use.

Conditions for safe storage, including any incompatibilities

- 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.

Section 8: Exposure controls/personal protection

Control parameters

Occupational Exposure Limits

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---------------------|------------|-------------------------------------|--|--------|
| Titanium dioxide | 13463-67-7 | PEL (long term) | 10 mg/m ³ | SG OEL |
| | | TWA (Respirable particulate matter) | 2.5 mg/m ³ (Titanium dioxide) | ACGIH |
| Aluminium hydroxide | 21645-51-2 | TWA (Respirable particulate matter) | 1 mg/m ³ (Aluminium) | ACGIH |

- Appropriate engineering control measures** : Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Individual protection measures, such as personal protective equipment (PPE)

- Eye/face protection : Wear the following personal protective equipment:

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Safety glasses

Skin 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).

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

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.

Section 9: Physical and chemical properties

Appearance : crystalline

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

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| | | |
|--|---|--|
| Flammability (solid, gas) | : | Will not burn 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 | : | 3.6 - 4.3 |
| Solubility(ies) 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 |

Section 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 | : | No hazardous decomposition products are known. |

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products

Section 11: Toxicological information

Information on likely routes of exposure : 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 |

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 |

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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 |

Trimethylolpropane:

| | | |
|---------|---|--------------------|
| Species | : | Rabbit |
| 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 |

Trimethylolpropane:

| | | |
|---------|---|-------------------|
| Species | : | Rabbit |
| Result | : | No eye irritation |

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

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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 |

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

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 Result: negative |
|--|--|

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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.

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

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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

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/m³ of respirable TiO₂. Slight lung fibrosis was observed at 50 and 250 mg/m³ levels. Microscopic lung tumours were also observed in 13 percent of the rats exposed to 250 mg/m³, 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 TiO₂ 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 TiO₂ industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO₂ dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO₂ 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.

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

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

Aluminium hydroxide:

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

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

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.

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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 |
| 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 |

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

Section 12: Ecological information

Toxicity

Components:

Titanium dioxide:

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

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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

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

Persistence and degradability

Components:

Trimethylolpropane:

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

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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

Mobility in soil

No data available

Other adverse effects

No data available

Section 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.

Section 14: Transport information

International Regulations

UNRTDG

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
Environmentally hazardous : no

IATA-DGR

UN/ID No. : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
Packing instruction (cargo) : Not applicable

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aircraft)
Packing instruction (passenger aircraft) : Not applicable

IMDG-Code

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
EmS Code : Not applicable
Marine pollutant : Not applicable

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

Special precautions for user

Not applicable

Section 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Protection and Management Act and : Not applicable
Environmental Protection and Management (Hazardous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) : Not applicable
Regulations

Section 16: Other information

Revision Date : 17.10.2024

Other information : Ti-Pure™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC.
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For further information contact the local Chemours office or nominated distributors.
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please contact your Chemours representative.

An electrostatic charge can potentially build up when pouring or conveying product from plastic bags. Do not use plastic bags in the presence of flammable or explosive vapors.

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/>

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
SG OEL : Singapore. Workplace Safety and Health (General Provisions) Regulations - First Schedule Permissible Exposure Limits of Toxic Substances.

ACGIH / TWA : 8-hour, time-weighted average
SG OEL / PEL (long term) : Permissible Exposure Level (PEL) Long Term

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 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

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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

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.

SG / EN