

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Printing date 07.10.2025

Version number 7.00 (replaces version 6.00)

Revision: 07.10.2025

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

1.1 Product identifier

Trade name: KRONOS Titanium dioxide (purified grades)
Product Codes KRONOS 1171, KRONOS 2071, KRONOS 3333

CAS Number: 13463-67-7
EC number: 236-675-5
EU REACH Registration number: 01-2119489379-17-xxxx

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

Identified uses of the substance or mixture White pigment for application in cosmetics and pharmaceuticals
Uses advised against For country-specific information, see Section 15.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: KRONOS INTERNATIONAL, Inc.
Peschstrasse 5
51373 Leverkusen, Germany
Tel.: INT +49 214 356-0

EMERGENCY TELEPHONE NUMBER: KRONOS INTERNATIONAL, Inc. (Germany)
Tel.: INT + 49 214 356-4444

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 The substance is not classified, according to the CLP regulation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 not applicable
Hazard pictograms not applicable
Signal word not applicable
Hazard statements not applicable

2.3 Other hazards

Results of PBT and vPvB assessment The product is an inorganic substance and does not fulfill the criteria for PBT and vPvB according to Annex XIII of REACH.
Determination of endocrine-disrupting properties The product does not contain any substances above the legal limits that have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1 Substances

CAS No. Designation: CAS: 13463-67-7 titanium dioxide

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EC number: 236-675-5

Additional information: Pigmentary titanium dioxide (not a nanomaterial according to European Commission Recommendation 2022/C 229/01)

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of symptoms.

After skin contact: Wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.
In case of persistent symptoms consult physician.

After swallowing: No special measures required.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.
The product is not flammable.

5.2 Special hazards arising from the substance or mixture

None

5.3 Advice for firefighters

Protective equipment: Use protective measures that suit the hazard conditions.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid causing dust.
Ensure adequate ventilation

6.2 Environmental precautions: No special measures required.

6.3 Methods and material for containment and cleaning up:

Collect mechanically.
Avoid causing dust.

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6.4 Reference to other sections See Section 8 for information on personal protective equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling Provide vacuum dust collection if dust is formed.
Information about protection against explosions and fires: The product is not flammable.

7.2 Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and containers: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Store under dry conditions.

7.3 Specific end use(s) There are no further specific end uses than those named in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Components with critical values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Not required.

8.2 Exposure controls

Individual protection measures, such as personal protective equipment
General protective and hygienic measures: The usual precautionary measures should be adhered to in handling chemicals.
Titanium dioxide pigments are not irritants but as with all fine powders can absorb moisture and natural oil from the surface of the skin during prolonged exposure. Prolonged exposure should be avoided by wearing suitable protective gloves and clothing.

Breathing equipment: If workplace exposure limits are exceeded, use respiratory protection according to national regulations.

Hand protection Requirements according to EN 374
Check protective gloves prior to each use for their proper condition. Preventive skin protection by use of skin-protecting agents is recommended.

Material of gloves: The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from

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manufacturer to manufacturer. If the product is used in a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Eye/face protection
Safety glasses
Body protection:
Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state

Solid

Colour:

White

Smell:

Odourless

Odour threshold:

Not relevant

Melting point/freezing point:

>1800°C

Boiling point or initial boiling point and boiling range

Not relevant

Flammability

Product is not flammable.

Flash point:

Not applicable

Auto-ignition temperature:

Not applicable

pH (100 g/l) at 20°C

5.5 - 8.5

Viscosity:
Kinematic viscosity

Not applicable

Solubility in / Miscibility with
Water:

Insoluble

Partition coefficient n-octanol/water (log value)

Not applicable

Density and/or relative density
Density:

20°C Anatase 3,9 g/cm³
 Rutile 4,2 g/cm³
Apparent density at 20°C:

500-900 kg/m³
Vapour density

Not applicable.

Particle characteristics

See section 3.

9.2 Other information

Appearance:
Form:

Powder

Important information on protection of health and environment, and on safety.
Self-flammability:

Not applicable

Explosive properties:

Product is not explosive.

Evaporation rate

Not applicable.

Information with regard to physical hazard classes

not applicable

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10.6 Hazardous decomposition products: No dangerous decomposition products known

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Subacute to chronic toxicity:

CAS: 13463-67-7 titanium dioxide

Oral NOAEL 3,500 mg/kg/d (rat) (90 d)

Dermal NOAEL (-)
no relevant data available

Inhalative NOAEC 10 mg/m³ (rat) (90 d)

Toxicokinetics, metabolism and distribution

Dermal absorption can be considered negligible, as titanium dioxide has been shown not to penetrate human skin to any appreciable degree.

11.2 Information on other hazards
Endocrine disrupting properties The product does not contain any substances above the legal limits that have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605.

* **SECTION 12: Ecological information**
12.1 Toxicity
Toxicity to fish

CAS: 13463-67-7 titanium dioxide

LC50 > 10,000 mg/l (Sheepshead minnow)
(semi-static, OECD 203 (acute toxicity for fish))
> 1,000 mg/l (Pimephales promelas)
(static, EPA-540/9-85-006, Acute Toxicity Test for Freshwater Fish)

Toxicity to Daphnia and other aquatic invertebrates

CAS: 13463-67-7 titanium dioxide

LC50 > 10,000 mg/l (Acartia tonsa)
(ISO 14669 (1999); ISO 5667-16 (1998))
> 1,000 mg/l (Daphnia magna)
(static, OECD 202 (daphnia acute immobilisation test))

Toxicity to algae and aquatic plants

CAS: 13463-67-7 titanium dioxide

EC50 > 100 mg/l (Pseudokirchneriella subcapitata)
(static, OECD 201 (freshwater alga and cyanobacteria, growth inhibition test))
> 10,000 mg/l (Skeletonema costatum)
(ISO 10253)

Toxicity to sediment organisms

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NOEC ≥ 100,000 mg/kg dw (Hyalabella azteca)
(semi-static, ASTM 1706)

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12.2 Persistence and degradability

Not relevant for inorganic substances.

12.3 Bioaccumulative potential

Does not accumulate in organisms

12.4 Mobility in soil

Not relevant for inorganic substances.

12.5 Results of PBT and vPvB assessment

The product is an inorganic substance and does not fulfill the criteria for PBT and vPvB according to Annex XIII of REACH.

PBT:

Not applicable

vPvB:

Not applicable

12.6 Endocrine disrupting properties

The product does not contain any substances above the legal limits that have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605.

12.7 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations
13.1 Waste treatment methods
European waste catalogue

Waste code number according to origin of waste

Uncleaned packagings:
Recommendation:

Disposal according to official regulations

SECTION 14: Transport information
14.1 UN number or ID number
ADR/RID/ADN, ADN, IMDG, IATA

not applicable

14.2 UN proper shipping name
ADR/RID/ADN

not applicable

ADN, IMDG, IATA

not applicable

14.3 Transport hazard class(es)

ADR/RID/ADN, ADN, IMDG, IATA
Class

not applicable

14.4 Packing group

ADR/RID/ADN, IMDG, IATA

not applicable

14.5 Environmental hazards

Not an environmentally hazardous substance

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Limitation of use Not approved for use as a food and feed additive in the European Union and Switzerland.

Directive 2012/18/EU

Named dangerous substances -

ANNEX I

Substance is not listed.

LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV): (Substances not listed)

Substance is not listed.

Regulation (EU) No 649/2012

Substance is not listed.

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

Substance is not listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

Substance is not listed.

Regulation (EC) No 273/2004 on drug precursors

Substance is not listed.

REGULATION (EU) 2024/590 on substances that deplete the ozone layer

Substance is not listed.

15.2 Chemical Safety Assessment

Substances of very high concern (SVHC) according to REACH, Article 57

The product is not listed as SVHC, it does not contain any substances of very high concern.

Chemical safety assessment: A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information pertains solely to the identified product and includes our reliance on regulations in effect and information from third parties as of the date hereof. It remains the sole responsibility of the customer to determine the suitability of the product when used in specific processes and applications or combined with other materials and to ensure compliance with all relevant laws, regulations, and standards governing those uses. The provision of this information does not constitute a warranty, guarantee, or representation of any kind. No contractual obligations, either express or implied, are created between KRONOS and any recipient of this information.

Department issuing data sheet: Global Quality Management

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Date of previous version: 24.03.2025

Version number of previous version: 6.00

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 ICAO: International Civil Aviation Organisation
 ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative

Sources
REACH-Registration Dossier
*** Data compared to the previous version altered.**
Amended according to Regulation (EU) no 2020/878

EU