

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**
Downstream User Import
Notification (DUIN) **submitted (2021)**

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 GB 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**

Additional information: **EUH210 Safety data sheet available on request.
EUH212 Warning! Hazardous respirable dust may be formed when
used. Do not breathe dust.**

2.3 Other hazards

Results of PBT and vPvB
assessment **not applicable**

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GB

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Determination of endocrine-disrupting properties**The product does not contain substances with endocrine disrupting properties.****SECTION 3: Composition/information on ingredients****3.1 Substances****CAS No. Designation:** 13463-67-7 titanium dioxide
EC number: 236-675-5**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.

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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.

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:

CAS: 13463-67-7 titanium dioxide

 WEL Long-term value: 10* 4** mg/m³
 *total inhalable **respirable

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.

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Breathing equipment:	If workplace exposure limits are exceeded, use respiratory protection according to national regulations. EN149: FFP2; EN143: P2
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 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

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	7 - 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/cm ³ Rutile 4,2 g/cm ³
Apparent density at 20°C:	500-900 kg/m ³
Vapour density	Not applicable.

9.2 Other information

Appearance:	
Form:	Powder

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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

Explosives	not applicable
Flammable gases	not applicable
Aerosols	not applicable
Oxidising gases	not applicable
Gases under pressure	not applicable
Flammable liquids	not applicable
Flammable solids	not applicable
Self-reactive substances and mixtures	not applicable
Pyrophoric liquids	not applicable
Pyrophoric solids	not applicable
Self-heating substances and mixtures	not applicable
Substances and mixtures, which emit flammable gases in contact with water	not applicable
Oxidising liquids	not applicable
Oxidising solids	not applicable
Organic peroxides	not applicable
Corrosive to metals	not applicable
Desensitised explosives	not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity	The substance is stable under normal use conditions.
10.2 Chemical stability	
Thermal decomposition /	
Conditions to be avoided:	No decomposition under normal use conditions
10.3 Possibility of hazardous reactions	No dangerous reactions known
10.4 Conditions to avoid	No further data; see Section 7
10.5 Incompatible materials:	No further data; see Section 7
10.6 Hazardous decomposition products:	No dangerous decomposition products known

SECTION 11: Toxicological information
11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	Based on available data, the classification criteria are not met.
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LD/LC50 values that are relevant for classification:

CAS: 13463-67-7 titanium dioxide

Oral LD50 > 5,000 mg/kg (rat) (OECD 425)

Dermal LD50 > 5,000 mg/kg (rabbit)

Inhalative LC50/4h > 6.8 mg/l (rat)

Skin corrosion/irritation OECD 404:
No irritant effectSerious eye damage/irritation OECD 405:
No irritant effect
Like any foreign body, particles (dust) can cause mechanical irritation.Respiratory or skin sensitisation OECD 406, OECD 429
No sensitizing effects.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

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 availableInhalative 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 substances with endocrine disrupting properties.

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)

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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

CAS: 13463-67-7 titanium dioxide

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

12.2 Persistence and degradability

Not relevant for inorganic substances.

12.3 Bioaccumulative potential

Does not accumulate in organisms

12.4 Mobility in soil

The substance is immobile in soil.

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 UK REACH.

PBT:

Not applicable

vPvB:

Not applicable

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

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

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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, 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

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.
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

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Carcinogenicity: In February 2006 IARC concluded, "There is inadequate evidence in humans for the carcinogenicity of titanium dioxide." Based on rat inhalation studies IARC concluded that there is "sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide," IARC's overall evaluation was that "Titanium dioxide is possibly carcinogenic to humans (Group 2b)". This conclusion was based on IARC's guidelines which require such a classification if two or more independent studies in one species carried out at different times or in different laboratories or under different protocols show evidence of tumours.

Department issuing data sheet: Global Quality Management

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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

UK REACH-Registration Dossier

* Data compared to the previous
version altered.

Amended according to Regulation (EU) no 2020/878