Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.08.2023 **Version number 2.00 (replaces version 1.00)** **Revision: 16.08.2023**

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

1.1 Product identifier
Trade name: **KRONOS 2171**

CAS Number: **13463-67-7**
EINECS 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**

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 product 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**

Additional information: **The products identified in Section 1.1 are not classified pursuant to Regulation 2020/217 (14th ATP to Regulation (EU) 1272/2008, Annex VI). EUH 210 and EUH 212 are included in Section 2.2 voluntarily.**
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: **The product 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 substances with endocrine disrupting properties.**

(Contd. on page 2)

(Contd. of page 1)

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Dangerous components: not applicable

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.

(Contd. on page 3)

(Contd. of page 2)

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: 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.
EN149: FFP2; EN143: P2

Hand protection Requirements according to EN 374

(Contd. on page 4)

(Contd. of page 3)

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.**

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information	
Colour:	**White**
Smell:	**Characteristic**
Odour threshold:	**Not determined.**
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**
pH (100 g/l) at 20°C	**5.5 - 7.0**
Viscosity:	
dynamic:	**Not applicable.**
Solubility in / Miscibility with	
Water:	**Insoluble**
Partition coefficient n-octanol/water (log value)	**Not determined.**
Density and/or relative density	
Density at 20°C:	**4.2 g/cm³**
Vapour density	**Not applicable.**
Particle characteristics	**Percentage of particles with an aerodynamic diameter ≤ 10 µm in the products identified in Section 1.1**

mean [%]	minimum [%]	maximum [%]	method
0,0071	0,0034	0,0116	EN15051-2

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.**

(Contd. on page 5)

(Contd. of page 4)

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.**

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)**

(Contd. on page 6)

(Contd. of page 5)

Skin corrosion/irritation	OECD 404: No irritant effect
Serious 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 (-)

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 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)

> 1,000 mg/l (Pimephales promelas)

Toxicity to Daphnia and other aquatic invertebrates

CAS: 13463-67-7 titanium dioxide

LC50 > 10,000 mg/l (Acartia tonsa)

> 1,000 mg/l (Daphnia magna)

Toxicity to algae and aquatic plants

CAS: 13463-67-7 titanium dioxide

EC50 > 100 mg/l (Pseudokirchneriella subcapitata)

(Contd. on page 7)

(Contd. of page 6)

> 10,000 mg/l (Skeletonema costatum)

Toxicity to sediment organisms

CAS: 13463-67-7 titanium dioxide

NOEC ≥ 100,000 mg/kg dw (Hyalella azteca)

12.2 Persistence and degradability	Not relevant for inorganic substances.
12.3 Bioaccumulative potential	Accumulation of the product is not to be expected.
12.4 Mobility in soil	The product is immobile in soil.

12.5 Results of PBT and vPvB assessment

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

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

(Contd. on page 8)

(Contd. of page 7)

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Directive 2012/18/EU
Named dangerous substances - ANNEX I 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

None of the ingredients is listed.

REGULATION (EU) 2019/1148

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

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is 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

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 specification sheet: Global Quality Management

Contact: KRONOS INTERNATIONAL, Inc.
Tel.: INT + 49 214 356-0
e-mail: MSDS@kronosww.com

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(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

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Trade name: KRONOS 2171

(Contd. of page 8)

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
ELINCS: European List of Notified 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**