



Safety Data Sheet
acc. to U.S. OSHA HCS 2012

Printing date 09/02/2015

Version 1

Reviewed on 09/02/2015

1 Identification**Product identifier****Trade name:** KRONOS 4311**Relevant identified uses of the substance or mixture**architectural coatings
industrial coatings
printing inks**Uses advised against**

None

Details of the supplier of the safety data sheet**Manufacturer/Supplier:** KRONOS (US), Inc.
5430 LBJ Freeway, Suite 1700
Dallas, Tx 75240-2397
(972) 233-1700**Emergency telephone number:** CHEMTREC: (800) 424-9300
KRONOS: (800) 866-5600**2 Hazard(s) identification****Classification of the substance or mixture**

The product is not classified according to the Globally Harmonized System (GHS).

Label elements**GHS label elements**

Not applicable

Hazard pictograms

Not applicable

Signal word

Not applicable

Hazard statements

Not applicable

3 Composition/information on ingredients**Chemical characterization: Mixtures****Description:** Titanium dioxide pigment dispersed in water**Dangerous components:**

Not applicable

Additional information

For the wording of the listed risk phrases refer to section 16.

4 First-aid measures**Description of first aid measures****General information**

Remove any clothing soiled by the product.

After inhalation

No relevant way of exposure.

After skin contact

Wash with water and soap and rinse thoroughly.

After eye contactRinse opened eye for several minutes under running water.
If irritation occurs consult physician.**(Contd. on page 2)**



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After swallowing Rinse out mouth and then drink plenty of water.
If symptoms occur consult physician.

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

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

Special hazards arising from the substance or mixture None

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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.

Environmental precautions: Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.

Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.

Reference to other sections See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling
Precautions for safe handling No special measures required.

Information about protection against explosions and fires: The product is not flammable

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Conditions for safe storage, including any incompatibilities**Requirements to be met by storerooms and receptacles:**

Recommended storage temperature >32°F

Information about storage in one common storage facility:

Not required.

Further information about storage conditions:

None

8 Exposure controls/personal protection**Additional information about design of technical systems:**

No further data; see item 7.

Control parameters**Components with limit 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.

Exposure controls**Personal protective equipment
General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Breathing equipment:

Not required.

Protection of hands:

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 the glove material should be made in consultation with the glove manufacturer on the basis of the material and application.

Eye protection:

Safety glasses

Body protection:

Protective work clothing.

9 Physical and chemical properties**Information on basic physical and chemical properties****General Information****Appearance:****Form:**

Liquid

Color:

White

Odor:

Weak, characteristic

Odour threshold:

Not determined.

pH-value:

8 - 10.5

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Change in condition

Melting point/Melting range:	not determined
Boiling point/Boiling range:	not determined
Flash point:	Not applicable
Ignition temperature:	Not applicable
Decomposition temperature:	Not applicable
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not determined.
Density:	at 20 °C (68°F) 2.36 g/cm ³ (19.73 lbs/US gal.)
Relative density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible
Partition coefficient (n-octanol/water):	Not applicable
Viscosity:	
dynamic at 20 °C (68 °F):	300 - 500 mPas (rotational, 20 rpm)
Solvent content:	
Solids content:	app. 77 %
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity	The product is stable under normal use conditions.
Chemical stability	
Thermal decomposition / conditions to be avoided:	No decomposition under normal use conditions.
Possibility of hazardous reactions	No dangerous reactions known
Conditions to avoid	No further data; see item 7.

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Incompatible materials: No further data; see item 7.

Hazardous decomposition products: No dangerous decomposition products known

11 Toxicological information**Information on toxicological effects****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral ATE > 2000 mg/kg (-)

Dermal ATE > 2000 mg/kg (-)

Inhalative ATE > 5 mg/m³ (-)**Primary irritant effect:****on the skin:** No irritant effect**on the eye:** No irritant effect.**Sensitization:** No sensitizing effects known.**Carcinogenic categories****IARC (International Agency for Research on Cancer)**

13463-67-7 Titanium dioxide: 2B

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

Toxicity Based on the composition it can be assumed that the mixture does not pose any risk for the aquatic environment.

Persistence and degradability No further relevant information available.

Bioaccumulative potential No further relevant information available.

Mobility in soil The product is immobile in soil.

Results of PBT and vPvB assessment

The mixture does not contain any components that are to be considered as PBT or vPvB according to the criteria of the REACH Regulation.

PBT: Not applicable.**vPvB:** Not applicable.

Other adverse effects No further relevant information available.

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13 Disposal considerations**Waste treatment methods****Recommendation**

Disposal must be made according to all federal, state, and local (municipal) regulations.

Uncleaned packagings:**Recommendation:**

Disposal must be made according to all federal, state, and local (municipal) regulations.

14 Transport information**UN-Number**

DOT, ADR, RID, ADN, ADN, IMDG, IATA Not applicable

UN proper shipping name

DOT, ADR, RID, ADN, ADN, IMDG, IATA Not applicable

Transport hazard class(es)**DOT, ADR, RID, ADN, ADN, IMDG, IATA****Class**

Not applicable

Packing group

DOT, ADR, RID, ADN, IMDG, IATA

Not applicable

Environmental hazards:**Marine pollutant:**

No

Special precautions for user

None

Transport in bulk according to Annex II of**MARPOL73/78 and the IBC Code**

Not applicable.

15 Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****SARA****Section 355 (Extremely hazardous substances):**

None of the ingredients is listed

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

TSCA and Canada DSL Status:

All ingredients are listed

Proposition 65**Chemicals known to cause cancer:**

None of the ingredients is listed

Carcinogenic categories**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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TLV (Threshold Limit Value established by ACGIH)

13463-67-7 Titanium dioxide: A4

NIOSH-Ca (National Institute for Occupational Safety and Health)

13463-67-7 Titanium dioxide

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: Environment & Safety**Contact:** KRONOS (US), Inc.
5430 LBJ Freeway, Suite 1700
Dallas, Tx 75240-2397
e-mail: SDS-NA@kronosww.com**Date of preparation / last revision** 09/02/2015 / -**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 européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
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

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