

Safety Data Sheet
 according to HPR, Schedule 1

Printing date 01/05/2026

Version 9.00

Reviewed on 01/05/2026

1 Identification

Product identifier	
Trade name:	KRONOS Titanium Dioxide (grades containing TMP)
Product Codes	KRONOS 1071; KRONOS 2043; KRONOS 2047; KRONOS 2056; KRONOS 2064; KRONOS 2066; KRONOS 2075; KRONOS 2076; KRONOS 2160; KRONOS 2225; KRONOS 2300; KRONOS 2310; KRONOS 2360; KRONOS 2365; KRONOS 2450; KRONOS 2800; KRONOS 2900
Relevant identified uses of the substance or mixture	White pigment for application in coating materials, printing inks, man-made fibres, plastics, paper, glass, vitreous enamels, ceramic products
Uses advised against	None
Details of the supplier of the safety data sheet	
Manufacturer/Supplier:	KRONOS Canada Inc. 3390, Marie-Victorin Varenes QC, J3X 1T4
Emergency telephone number:	+1-888-226-8832 (CANUTEC) for transportation emergencies only (Canada and US) +1-800-424-9300 (CHEMTREC) for transportation emergencies only (Canada and US) +1-800-866-5600 for other product information (8:00AM – 5:00PM US Central Time)

2 Hazard 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

Dangerous components:

CAS: 77-99-6	Trimethylolpropane (TMP)	≤ 0.45% w/w
EINECS: 201-074-9	☠ Toxic to Reproduction 2, H361	

Additional information	Certain manufacturers of TMP self-classified the substance as a category 2, suspected human reproductive toxicant (Repr. 2, H361 Suspected of damaging fertility or the unborn child), under the European Union's REACH regulation based on their interpretation
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(Contd. on page 2)

Safety Data Sheet
 according to HPR, Schedule 1

Printing date 01/05/2026

Version 9.00

Reviewed on 01/05/2026

Trade name: KRONOS Titanium Dioxide (grades containing TMP)

(Contd. of page 1)

 of the results of an OECD 443 Extended One-Generation Reproduction Toxicity study in rats commissioned by those manufacturers. See Section 11 for additional information.

4 First-aid measures

Description of first aid measures
General information

No special measures required.

After inhalation

Supply fresh air; consult doctor in case of complaints.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

After eye contact

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing

Rinse out mouth and then drink plenty of water.

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:

No special measures required.

Methods and material for containment and cleaning up:

Avoid dust formation. Sweep or vacuum up, use vacuum approved for fine dusts.

Reference to other sections

See Section 8 for information on personal protective equipment.

(Contd. on page 3)

Safety Data Sheet
 according to HPR, Schedule 1

Printing date 01/05/2026

Version 9.00

Reviewed on 01/05/2026

Trade name: KRONOS Titanium Dioxide (grades containing TMP)

(Contd. of page 2)

See Section 13 for disposal information.

7 Handling and storage

 Precautions for safe handling
 Information about protection
 against explosions and fires:

Provide vacuum dust collection if dust is formed.

 The product is not flammable
 Titanium dioxide product may be packaged at temperatures of
 approximately 100 to 120 °C (212 to 248 °F) and stay hot for a long
 time depending on ambient temperatures and inventory storage
 practices. Due to the potential of elevated pigment temperature,
 caution should be used while handling pigment and when used in
 or near volatile solvent applications.

Conditions for safe storage, including any incompatibilities

 Requirements to be met by
 storerooms and receptacles:

No special requirements.

 Information about storage in one
 common storage facility:

Not required

 Further information about
 storage conditions:

Store in dry conditions.

8 Exposure controls/ Personal protection

Control parameters

Components with limit values that require monitoring at the workplace:

CAS: 13463-67-7 Titanium dioxide

 EL (Canada) TWA: 10* 3** mg/m³
 *total dust; **respirable fraction; IARC 2B

 OEL-QUEBEC Long-term value: 10*; N.E.** mg/m³
 * total dust; ** respirable dust

 ACGIH - TLV (USA) TWA: 10 TWA, mg/m³
 respirable fraction 1mg/m³ TWA

 OSHA - PEL (USA) TWA: 15* 5**mg/m³
 *total dust, ** respirable dust, 8 hr TWA

Exposure controls

 Use local exhaust ventilation if airborne concentrations would
 otherwise exceed applicable exposure limits.

 Personal protective equipment
 General protective and hygienic
 measures

 The usual precautionary measures for handling chemicals should
 be followed.
 Titanium dioxide pigments are not irritant but as with all fine
 powders can absorb moisture and natural oil from the surface of the
 skin during prolonged exposure. Prolonged exposure and potential
 skin absorption of TMP should be avoided by wearing suitable
 protective gloves and clothing that covers the arms.
 Store protective clothing separately.

(Contd. on page 4)

Safety Data Sheet
 according to HPR, Schedule 1

Printing date 01/05/2026

Version 9.00

Reviewed on 01/05/2026

Trade name: KRONOS Titanium Dioxide (grades containing TMP)

(Contd. of page 3)

Breathing equipment:	If workplace exposure limits are exceeded, use respiratory protection according to national regulations. The respirator must be selected by a technically qualified individual.
Protection of hands:	Use gloves appropriate for work conditions to minimize prolonged skin contact and prevent drying and subsequent irritation of skin. 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 depends on the type of job, the characteristics of all substances to be handled and on further marks of quality, which may vary 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 protection:	Safety glasses
Body protection:	Wear long-sleeved protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Physical state

Color:	Solid. White
Odor:	Odorless
Odor threshold:	Not relevant
Melting point/Melting range:	>1800°C
Boiling point/Boiling range:	Not relevant
Flammability:	Product is not flammable.
Flash point:	Not applicable
Auto igniting:	Not applicable
pH-value at 20°C:	6.0 - 9.5
Viscosity:	
dynamic:	Not applicable
Solubility in / Miscibility with	
Water:	Insoluble
Partition coefficient (n-octanol/water):	Not applicable
Vapor pressure:	
Density:	20°C Anatase 3,9 g/cm ³ (30 lbs/ U.S. gal.) Rutile 4,2 g/cm ³ (35 lbs/U.S. gal.)
Bulk density:	ca. 500-900 kg/m ³ (4.2 - 7.5 lbs/U.S. gal.)
Vapor density	Not applicable

Other information

Appearance:

Form: Powder

(Contd. on page 5)

Safety Data Sheet
 according to HPR, Schedule 1

Printing date 01/05/2026

Version 9.00

Reviewed on 01/05/2026

Trade name: KRONOS Titanium Dioxide (grades containing TMP)

(Contd. of page 4)

Important information on protection of health and environment, and on safety.

 Danger of explosion:
 Evaporation rate

 Product is not explosive.
 Not applicable.

10 Stability and reactivity

Reactivity The substance 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 Section 7.

Incompatible materials:

No further data; see Section 7.

 Hazardous decomposition
 products:

No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

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)

CAS: 77-99-6 Trimethylolpropane (TMP)

Oral LD50 14,700 mg/kg (rat)

Dermal LD50 > 10,000 mg/kg (rabbit)

 Inhalative LC50 850 mg/m³ (rat)

 Primary irritant effect:
 on the skin:

OECD 404:

No irritant effect.

Powderized material may dry and mechanically irritate skin.

on the eye:

OECD 405:

No irritating effect.

Like any foreign body, particles (dust) can cause mechanical irritation.

Sensitization:

OECD 406, OECD 429

(Contd. on page 6)

**Safety Data Sheet
according to HPR, Schedule 1**

Printing date 01/05/2026

Version 9.00

Reviewed on 01/05/2026

Trade name: KRONOS Titanium Dioxide (grades containing TMP)

(Contd. of page 5)

No sensitizing effects.**Subacute to chronic toxicity:****CAS: 13463-67-7 Titanium dioxide**

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

Dermal NOAEL mg/kg/d
no relevant data availableInhalative NOAEC 10 mg/m³ (rat) (90 d)**CAS: 77-99-6 Trimethylolpropane (TMP)**Oral NOAEL 67 mg/kg (rat)
subchronic 90-days study**Additional toxicological
information:****Trimethylolpropane (TMP)**

Certain manufacturers of TMP self-classified the substance as a Category 2, suspected human reproductive toxicant (Repr. 2, H361 Suspected of damaging fertility or the unborn child) under the European Union's (EU) REACH regulation based on their interpretation of the results of an OECD 443 Extended One-Generation Reproduction Toxicity study in rats commissioned by those manufacturers. Taking into consideration the data from the study, the group also determined a new EU Derived No Effect Level (DNEL) for workers of 0.94 mg/kg/d (systemic, long-term, dermal route). TMP is contained in the specified TiO₂ products at less than 0.45 %. See Section 8 for recommended exposure control/personal protection.

Carcinogenic categories**IARC (International Agency for Research on Cancer)****CAS: 13463-67-7 Titanium dioxide: 2B****NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information**Toxicity**

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

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)

(Contd. on page 7)

CA

Safety Data Sheet
 according to HPR, Schedule 1

Printing date 01/05/2026

Version 9.00

Reviewed on 01/05/2026

Trade name: KRONOS Titanium Dioxide (grades containing TMP)

(Contd. of page 6)

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)

Persistence and degradability CAS: 13463-67-7 Titanium dioxide: not relevant for inorganic substances.

Other information: CAS: 77-99-6 Trimethylolpropane: not easily biodegradable

Bioaccumulative potential Does not accumulate in organisms

Mobility in soil The product is immobile in soil.

Other adverse effects No further relevant information available.

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/TDG, ADR, ADN, IMDG, IATA Not applicable

UN proper shipping name

ADR, ADN, IMDG, IATA Not applicable

(Contd. on page 8)

CA

Safety Data Sheet
 according to HPR, Schedule 1

Printing date 01/05/2026

Version 9.00

Reviewed on 01/05/2026

Trade name: KRONOS Titanium Dioxide (grades containing TMP)

(Contd. of page 7)

Transport hazard class(es)

DOT/TDG, ADR, ADN, IMDG, IATA

Class Not applicable

Packing group

DOT/TDG, ADR, IMDG, IATA Not applicable

Environmental hazards Not an environmentally hazardous substance.

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

Not applicable

Special precautions for user Not applicable

15 Regulatory information

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

TSCA and Canada DSL Status:

All components have the value ACTIVE.

**WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)
 EPA (Environmental Protection Agency)**

None of the ingredients is listed.

Additional Occupational
Exposure Limit Values:
OEL-NEW BRUNSWICK:

 OEL-ALBERTA:
 mg/m³

 TWA: 1997 ACGIH TLV mg/m³
 Long-term value: 10*; N.E.**

 * total dust; ** respirable dust
 Long-term value: 10*; 5** mg/

OEL-NW TERRITORIES:
 m³

 * total dust; ** respirable dust
 Long-term value: 10*; N.E.**

OEL-NOVA SCOTIA:
 mg/m³

* total dust; ** respirable dust

OEL-ONTARIO:
 mg/m³

Long-term value: 10*; N.E.**

OEL-SASKATCHEWAN:

 * total dust; ** respirable dust
 Long-term value: 10* mg/m³
OEL-YUKON TERRITORIES:

 * total dust;
 20 mg/m³, 15-min avg.
 Long-term value: 10* mg/m³
OEL-NEWFOUNDLAND, LABRADOR: Long-term value: 10*; N.E.**
 mg/m³

 * total dust;
 20 mg/m³, 15-min avg.

 * total dust; ** respirable dust
 STEL: 10 A mg/m³
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

(Contd. on page 9)

**Safety Data Sheet
according to HPR, Schedule 1**

Printing date 01/05/2026

Version 9.00

Reviewed on 01/05/2026

Trade name: KRONOS Titanium Dioxide (grades containing TMP)

(Contd. of page 8)

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.

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Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
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

CA