

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### Product Identifier

**Product name** RCS596 & RCS596 Improved

**Synonyms** Titanium dioxide

#### Recommended use of the chemical and restrictions on use

**Recommended Use** Pigment  
**Uses advised against** For use in industrial installations only.

#### Details of the supplier of the safety data sheet

**Supplier Address** INEOS Pigments USA Inc.  
6752 Baymeadow Drive  
Glen Burnie, MD, USA 21060  
tele: 410-229-4400  
fax: 410-229-4415

For further information, please contact

**E-mail address** regulatory.pigments@ineos.com

#### 24 Hour Emergency Phone Number

**Emergency telephone** Chemtrec (USA) 1-800-424-9300

### 2. HAZARDS IDENTIFICATION

#### Classification

#### **OSHA Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

#### Label Elements

#### **EMERGENCY OVERVIEW**

Not Hazardous

<b>Appearance</b> aqueous solution	<b>Physical State</b> Liquid	<b>Odor</b> None
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#### **Precautionary Statements - Prevention**

Not applicable

#### **Precautionary Statements - Response**

Not applicable

#### **Precautionary Statements - Storage**

Not applicable

**Precautionary Statements - Disposal**

Not applicable

**Other Information****Hazards not otherwise classified (HNOC)** Not applicable**Other Hazards** None.**3. COMPOSITION/INFORMATION ON INGREDIENTS****Synonyms** Titanium dioxide

Chemical name	CAS No	weight-%	Trade secret
Titanium dioxide	13463-67-7	>50	*
Water	7732-18-5	>20	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES****FIRST AID MEASURES****Eye Contact** Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists: Get medical advice/attention.**Skin contact** Wash skin with soap and water. If skin irritation persists, call a physician.**Inhalation** Remove to fresh air. Call a physician or poison control center immediately.**Ingestion** Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.**Self-protection of the first aider** Use personal protective equipment as required.**Most important symptoms and effects, both acute and delayed****Symptoms** No information available.**Indication of any immediate medical attention and special treatment needed****Note to physicians** Treat symptomatically.**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment**Unsuitable Extinguishing Media** None known based on information supplied.**Specific hazards arising from the chemical** No information available.**Hazardous combustion products** Non-combustible.**Explosion data****Sensitivity to Mechanical Impact** None.**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with eyes and skin. Use personal protection recommended in Section 8.

**For emergency responders** Approach area from upwind. Use personal protection recommended in Section 8.

### Environmental Precautions

**Environmental Precautions** Do not flush into surface water or sanitary sewer system.

### Methods and material for containment and cleaning up

**Methods for Containment** Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

**Methods for cleaning up** Pick up and transfer to properly labeled containers. Following product recovery, flush area with water.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Packaging materials** Keep only in original container.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure guidelines** Personal, workplace, and environmental monitoring may be carried out to prevent exposure above recommended limits.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Alberta OEL	British Columbia OEL	Ontario TWA	Quebec OEL
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> total dust	IDLH: 5000 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 3 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>

### **Legend**

*NIOSH Immediately Dangerous to Life or Health*

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems  
Ensure adequate ventilation, especially in confined areas

**Individual protection measures, such as personal protective equipment**

<b>Eye/face Protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and Body Protection</b>	Long sleeved clothing. Protective gloves.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>General hygiene considerations</b>	Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Keep working clothes separately. Regular cleaning of equipment, work area and clothing is recommended. Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Appearance</b>	aqueous solution
<b>Odor</b>	None	<b>Color</b>	white
<b>Odor threshold</b>	Not applicable		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	7 - 9	aqueous solution
<b>Melting point/freezing point</b>	32 °F	freezing point / freezing range
<b>Boiling point / boiling range</b>	212 °F	-
<b>Flash Point</b>		Not applicable
<b>Evaporation Rate</b>		No data available
<b>Flammability (solid, gas)</b>		Not applicable
<b>Flammability Limit in Air</b>		Not applicable
<b>Upper flammability limit:</b>	Not applicable	
<b>Lower flammability limit:</b>	Not applicable	
<b>Vapor pressure</b>		No data available
<b>Vapor Density</b>		No data available
<b>Specific gravity</b>	1.9 - 2.5	(water = 1)
<b>Water solubility</b>	Insoluble in water	-
<b>Solubility in other solvents</b>	Insoluble in common solvents	-
<b>Partition coefficient</b>		No data available
<b>Autoignition Temperature</b>		Not applicable
<b>Decomposition temperature</b>		Not applicable
<b>Kinematic viscosity</b>		No data available
<b>Dynamic viscosity</b>		No data available
<b>Explosive properties</b>	Not an explosive	
<b>Oxidizing properties</b>	None known	

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	Not applicable
<b>VOC content (%)</b>	None
<b>Density</b>	No information available
<b>Surface Area</b>	No information available
<b>Bulk Density</b>	No information available

**10. STABILITY AND REACTIVITY**

<b>Reactivity</b>	None known based on information supplied.
<b>Stability</b>	Stable under recommended storage conditions.

<b><u>Possibility of hazardous reactions</u></b>	None under normal processing
<b><u>Hazardous polymerization</u></b>	None under normal processing
<b><u>Conditions to Avoid</u></b>	None known.
<b><u>Incompatible Materials</u></b>	None known based on information supplied
<b><u>Hazardous decomposition products</u></b>	None known based on information supplied

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Product Information</b>	Product does not present an acute toxicity hazard based on known or supplied information. Information in this section is a summary of the conclusions of the chemical safety assessment conducted under REACH.
<b>Inhalation</b>	As a nuisance dust, prolonged exposures above recommended levels may cause adverse effects on the lung. Temporary drying effect and/or irritation of mucous membranes may result from excessive exposure. Exposure to dust may aggravate pre-existing respiratory conditions.
<b>Eye Contact</b>	Inert foreign body hazard only.
<b>Skin contact</b>	Titanium dioxide does not penetrate either intact or abraded human skin. Prolonged contact may result in rashes/irritations due to drying of the skin and/or mechanical abrasion related to skin-to-clothing contact or skin-to-skin contact.
<b>Ingestion</b>	No data available.

### Component Information

<b>Chemical name</b>	<b>Oral LD50</b>	<b>Dermal LD50</b>	<b>Inhalation LC50</b>
Titanium dioxide 13463-67-7	> 5000 mg/kg ( Rat )	-	> 6,82 mg/L (Rat) 4 h

### Information on toxicological effects

**Symptoms** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	Titanium dioxide was not classifiable as a skin corrosive or irritant based on in vivo test results for titanium dioxide submitted in the European Union (REACH) joint submission registration dossier for the substance.
<b>Serious eye damage/eye irritation</b>	Titanium dioxide was not classifiable as an eye irritant based on in vivo test results for titanium dioxide submitted in the European Union (REACH) joint submission registration dossier for the substance.
<b>Sensitization</b>	No information available.
<b>Germ Cell Mutagenicity</b>	Titanium dioxide was negative when tested in vitro in bacterial reverse mutation assays and in mammalian cell gene mutation and clastogenicity assays as well as when tested in vivo.
<b>Carcinogenicity</b>	Titanium dioxide is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have been shown to cause lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. However, other laboratory animals such as mice

and hamsters did not develop lung tumors under similar testing with titanium dioxide. Furthermore, human epidemiology studies do not suggest an association between occupational exposure to titanium dioxide and risk for cancer.

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7	-	Group 2B	-	X

**Legend**

IARC (International Agency for Research on Cancer)  
Group 2B - Possibly Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)  
X - Present

<b>Reproductive Toxicity</b>	Titanium dioxide was not classifiable as a reproductive hazard based on in vivo test results for titanium dioxide submitted in the European Union (REACH) joint submission registration dossier for the substance.
<b>Developmental Toxicity</b>	None known.
<b>Teratogenicity</b>	None known.
<b>STOT - single exposure</b>	Titanium dioxide is not classifiable based on a lack of significant and/or severe toxic effects in humans or in experimental animals following acute exposures.
<b>STOT - repeated exposure</b>	Repeated inhalation exposures in rats to poorly soluble dusts such as titanium dioxide lead to a pattern of pulmonary effects including inflammation and fibrosis that are not observed in other rodent species, nonhuman primates, or humans under similar conditions. Therefore, titanium dioxide is not classifiable for repeated exposure.
<b>Aspiration Hazard</b>	No information available.

## 12. ECOLOGICAL INFORMATION

<b>Marine pollutant</b>	No
<b><u>Ecotoxicity</u></b>	Titanium dioxide is of low acute aquatic toxicity.
<b><u>Persistence and degradability</u></b>	Titanium dioxide is persistent and does not bioaccumulate. Not readily biodegradable.
<b><u>Bioaccumulation</u></b>	Material does not bioaccumulate.
<b><u>Mobility</u></b>	Not mobile.
<b><u>Other adverse effects</u></b>	No information available
<b>Ozone</b>	Not applicable

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

<b>Disposal of wastes</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Do not reuse container. Improper disposal or reuse of this container may be dangerous and illegal. If recycling is not practical, dispose of container in compliance with local and regional laws.

## 14. TRANSPORT INFORMATION

**DOT**

Proper Shipping Name Not regulated  
 Marine pollutant No

**TDG**

Proper Shipping Name Not regulated

**MEX**

Proper Shipping Name Not regulated

**ICAO (air)**

Proper Shipping Name Not regulated

**IATA**

Proper Shipping Name Not regulated

**IMDG**

Proper Shipping Name Not regulated

## 15. REGULATORY INFORMATION

**International Inventories**

TSCA	Complies
DSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	Does not comply
TCSI	Does not comply

**Legend:**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List  
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECSC - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 AICS - Australian Inventory of Chemical Substances  
 NZIoC - New Zealand Inventory of Chemicals  
 TCSI - Taiwan Chemical Substance Inventory

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals  
Respirable dust

Chemical name	California Proposition 65
Titanium dioxide - 13463-67-7	Carcinogen

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Titanium dioxide 13463-67-7	X	X	X

<b>16. OTHER INFORMATION</b>
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<b>Prepared by</b>	Product Stewardship Department
<b>Issue date</b>	08-May-2019
<b>Revision date</b>	08-May-2019
<b>Revision note</b>	No information available
<b>Other Information</b>	This product is intended for industrial use. This product is not intended for consumption, cosmetic, pharmaceutical or medical end use. INEOS will not knowingly sell product for use into these applications

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**