DCL-8045 BUFF RUTILE TITANIUM DIOXIDE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 1/27/2022 Revision date: 3/20/2026 Supersedes: 1/15/2026 Version: 1.3

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : DCL-8045 BUFF RUTILE TITANIUM DIOXIDE
Product code : 200223

1.2. Other means of identification

Other means of identification : 8045 BUFF RUTILE TITANIUM DIOXIDE

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Pigment,Coloring agents

1.4. Supplier's details

Supplier
DCL Corporation (Pigments Services Inc)
1506 Bushy Park Road
Goose Creek, South Carolina
USA, 29445
T +1 416 791-4200
SDS@pigments.com - pigments.com

1.5. Emergency phone number

Emergency number : +1 800 424-9300; +1-703-527-3887 (CHEMTREC, CCN12891) 24 hours, 7 days a week

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. Label elements

GHS US labeling

No labeling applicable

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

Other hazards which do not result in classification : Unknown.

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Titanium Dioxide (Main constituent)	CAS-No.: 13463-67-7	≥ 90	Carc. 2, H351
Silicon dioxide, amorphous	CAS-No.: 7631-86-9	≤ 1.2	Acute Tox. 4 (Inhalation:dust,mist), H332

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse eyes with water as a precaution.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center/doctor/physician if you feel unwell.

Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Carbon dioxide (CO2).

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Minimize generation of dust which may be combustible.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage. Stop leak if safe to do so.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Evacuate area. Only qualified personnel equipped with suitable protective equipment may intervene. Notify fire brigade and environmental authorities.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Wear recommended personal protective equipment. Self-contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Stop leak, if possible without risk.

Methods for cleaning up : Take up mechanically (preferable by vacuum cleaning or gentle sweeping).

Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Handle and open container with care. Keep away from sources of ignition - No smoking. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Avoid dust formation. Keep only in original container. Do not handle until all safety precautions have been read and understood.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Additional hazards when processed : Local exhaust and general ventilation must be adequate to meet exposure standards.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Keep cool. Protect from sunlight.

Specific end uses : Restricted to professional users.

Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

DCL-8045 BUFF RUTILE TITANIUM DIOXIDE	
USA - OSHA - Occupational Exposure Limits	
Remark (OSHA)	Nuisance Dust

Titanium Dioxide (13463-67-7)	
USA - ACGIH® - Threshold Limit Values	
Local name	Titanium dioxide
ACGIH® TLV® TWA	10 mg/m³
Remark (ACGIH®)	TLV® Basis: LRT irr; pneumoconiosis. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Titanium dioxide (Total dust)
OSHA PEL TWA	15 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Measure concentrations regularly, and at the time of any change occurring in conditions likely to have consequences on workers exposure. Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection:

Type	Material	Permeation	Thickness (mm)	Penetration
Protective gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	>0.35mm	
Wear suitable gloves resistant to chemical penetration				

Eye protection:

Chemical goggles or safety glasses

Type	Field of application	Characteristics
Safety glasses	Dust	With side shields

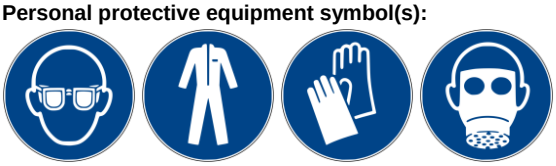
Skin and body protection:

Wear suitable protective clothing

Type
Plastic apron or overall

Respiratory protection:		
In case of insufficient ventilation, wear suitable respiratory equipment		
Device	**Filter type**	**Condition**
Dust mask	Type P3, Particle filter	Dust protection

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder.
Color	:	White
Odor	:	Odourless
Odor threshold	:	Not applicable Not applicable
pH	:	3.5 – 7.5
Melting point	:	No data available
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	Not applicable
Relative evaporation rate (butyl acetate=1)	:	Not applicable
Relative evaporation rate (ether=1)	:	Not applicable
Flammability (solid, gas)	:	Not applicable Not flammable.
Vapor pressure	:	Not applicable
Vapor pressure at 50°C	:	Not applicable
Relative vapor density at 20°C	:	Not applicable
Relative density	:	No data available
Relative gas density	:	Not applicable
Solubility	:	Insoluble.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	Not applicable
Explosion limits	:	Not applicable Not explosive
Explosive properties	:	Not explosive.
Oxidizing properties	:	Not applicable.
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

DCL-8045 BUFF RUTILE TITANIUM DIOXIDE	
LD50 oral rat	No data available
LD50 dermal rat	No data available
LC50 Inhalation - Rat	No data available

Titanium Dioxide (13463-67-7)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LC50 Inhalation - Rat	> 5.09 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male, Experimental value, Inhalation (dust), 14 day(s))
LC50 Inhalation - Rat (Dust/Mist)	> 6.82 mg/l Source: ECHA

Silicon dioxide, amorphous (7631-86-9)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 Inhalation - Rat	2.08 mg/l/4h
LC50 Inhalation - Rat (Dust/Mist)	5.01 mg/l Source: ECHA
ATE US (vapors)	2.08 mg/l/4h
ATE US (dust, mist)	2.08 mg/l/4h

Skin corrosion/irritation : Not classified.
pH: 3.5 – 7.5

Titanium Dioxide (13463-67-7)	
pH	7 (aqueous suspension, 10 %)

Silicon dioxide, amorphous (7631-86-9)	
pH	6.5 – 7.5 (5 %)

Serious eye damage/irritation : Not classified
pH: 3.5 – 7.5

Titanium Dioxide (13463-67-7)	
pH	7 (aqueous suspension, 10 %)

Silicon dioxide, amorphous (7631-86-9)	
pH	6.5 – 7.5 (5 %)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : In chronic inhalation toxicity studies carried out with titanium dioxide in rats, microscopic lung tumours were observed in 13% of the rats exposed to the highest dose, an exposure level that caused lung overloading and impairment of rat lungs clearance mechanisms. Further studies were carried out and these tumours were found to occur only under particle overload conditions in a uniquely sensitive species (rat) and have little or no relevance for humans. IARC has evaluated titanium dioxide as pertaining to Group 2B: “possibly carcinogenic to humans”, based upon inadequate evidence in humans and sufficient evidence in experimental animals. IARC evaluation guidelines consider the generation of tumours, in two different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence. The conclusion of several epidemiological studies on more than 20,000 TiO2 industry workers in Europe and the USA did not suggest a carcinogenic effect of titanium dioxide dust on the human lung. Based upon all available study results, it’s concluded that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.

Titanium Dioxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans

Silicon dioxide, amorphous (7631-86-9)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not applicable

DCL-8045 BUFF RUTILE TITANIUM DIOXIDE	
Viscosity, kinematic	Not applicable

Titanium Dioxide (13463-67-7)	
Viscosity, kinematic	Not applicable (solid)

Silicon dioxide, amorphous (7631-86-9)	
Viscosity, kinematic	Not applicable (solid)

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : No data available; no hazard expected.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Titanium Dioxide (13463-67-7)	
LC50 - Fish [1]	> 100 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Other aquatic organisms [1]	> 100 mg/l Test organisms (species):
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	61 mg/l (EPA 600/9-78-018, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)
LOEC (chronic)	5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Silicon dioxide, amorphous (7631-86-9)	
LC50 - Fish [1]	10000 mg/l Source: ECHA
EC50 - Crustacea [1]	> 5000 mg/l Source: ECHA
EC50 72h - Algae [1]	> 173.1 mg/l (OECD 201: Alga, Growth Inhibition Test, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

DCL-8045 BUFF RUTILE TITANIUM DIOXIDE	
Persistence and degradability	Not rapidly degradable

Titanium Dioxide (13463-67-7)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Silicon dioxide, amorphous (7631-86-9)	
Persistence and degradability	Biodegradability in soil: not applicable, Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Titanium Dioxide (13463-67-7)	
Bioaccumulative potential	Not bioaccumulative.

Silicon dioxide, amorphous (7631-86-9)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Titanium Dioxide (13463-67-7)	
Surface tension	No data available in the literature
Ecology - soil	Low potential for mobility in soil.

Silicon dioxide, amorphous (7631-86-9)	
Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

UN-No. (DOT) : Not applicable
UN-No. (TDG) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not applicable

TDG
Transport hazard class(es) (TDG) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable
Packing group (TDG) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not applicable

TDG
Not applicable

IMDG
Not applicable

IATA
Not applicable

SECTION 15 Regulatory information

15.1. Federal regulations

DCL-8045 BUFF RUTILE TITANIUM DIOXIDE	
SARA Section 311/312 Hazard Classes	Non hazardous.

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Titanium Dioxide (13463-67-7)
Listed on the Canadian DSL (Domestic Substances List)

Silicon dioxide, amorphous (7631-86-9)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Titanium Dioxide (13463-67-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Silicon dioxide, amorphous (7631-86-9)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

DCL-8045 BUFF RUTILE TITANIUM DIOXIDE
According to corresponding national regulations and available test data, there is no labelling requirement for this product.

Titanium Dioxide (13463-67-7)
Listed on IARC (International Agency for Research on Cancer) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Silicon dioxide, amorphous (7631-86-9)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

15.3. State regulations

WARNING: This product can expose you to Titanium dioxide (airborne, unbound particles of respirable size), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
Titanium Dioxide(13463-67-7)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Silicon dioxide, amorphous(7631-86-9)	U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

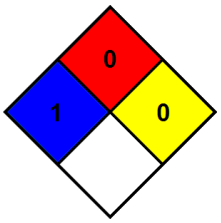
Revision date : 3/20/2026
Issue date : 1/27/2022
Training advice : Users of breathing apparatus must be trained.

Full text of hazard classes and H-statements	
H332	Harmful if inhaled
H351	Suspected of causing cancer.

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Indication of changes:		
Section	**Changed item**	**Comments**
2	Signal word (GHS US)	**Removed**
2	Hazard statements (GHS US)	**Removed**
2.1	GHS-US classification	**Modified**

Safety Data Sheet (SDS), USA

The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.

DCL pigment, pigment preparations and special dyes are technical grade products. Unless otherwise stated or agreed DCL products are recommended only for industrial use in applications involving coloration of inks, plastics and coatings. Other intended uses including their use in consumer products governed by specific legislation or standards should be referred to the manufacturer. The use of this product is not authorized for the direct coloration of food, the coloration of articles that come into contact with internal organs or body fluids, tattoo inks, nor for cosmetic use. The customer must perform its own tests to determine the suitability of the supplied product for the intended purpose. It is also the customer's responsibility to ensure that its intended uses shall be fully in compliance with all applicable laws and regulations in each relevant country or region. The data contained in the SDS apply only to DCL products sold under the stated trade names.