SAFETY DATA SHEET

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 as amended by Regulation (EC) No 1272/2008 and Commission Regulation (EU) No 453/2010.

Issuing Date	**Revision Number**
07-August-13	1

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

REACH Reg. No 01-2119489379-17-0048
Product Name TiONA 100, TiONA 113, TiONA 121, TiONA 122, TiONA 128, TiONA 134
Synonyms Titania

1.2 Identified uses

Recommended use White pigment that imparts opacity to surface coatings, plastics and paper.
Uses advised against For industrial use only.

1.3 Supplier's details

Company
The National Titanium Dioxide Company Ltd. (Cristal)
P.O. Box 13586
Jeddah 21414, Kingdom of Saudi Arabia
Telephone: +966 2 224 8000
Fax: +966 2 606 9087

Business Contact
Cristal Belgium bvba
Brielen 9, 2830 Willebroek, Belgium
Telephone: +32-3-860-4800
Fax: +32-3-860-4801

For further information, please contact:
E-mail Address regulatory.query@cristal.com

1.4 Emergency telephone number

Europe	**SGS: + 32 (0)3-575-5555**

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

DIRECTIVE 67/548/EC
Symbol(s) None.

REGULATION (EC) No 1272/2008

Aspiration toxicity	Not classified
Acute oral toxicity	Not classified
Acute dermal toxicity	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/eye irritation	Not classified
Respiratory sensitization	Not classified
Skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ systemic toxicity (single exposure)	Not classified
Specific target organ systemic toxicity (repeated exposure)	Not classified
Acute aquatic toxicity	Not classified

Chronic aquatic toxicity	Not classified
Ozone	Not applicable

2.2 Label Elements

None

2.3 Other hazards

Inhalation Inert nuisance dust. Temporary drying effect and/or irritation of mucous membranes may result from excessive exposure. Exposure to dust may aggravate pre-existing respiratory conditions.

Skin Non-corrosive and non-sensitizing. 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.

Eyes Avoid contact with eyes.

Ingestion No adverse health effects anticipated by this route during proper industrial handling.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS-No.	EC No.	Weight %	Classification	Annex VI - Harmonized	Self-Classification
Titanium dioxide	13463-67-7	236-675-5	>80	Not hazardous	Not classified	Self-Classification

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3.2 Mixtures

not applicable

4. FIRST AID MEASURES

4.1 Description of necessary first-aid measures

Eye contact In the case of contact with eyes, rinse immediately with plenty of water. If symptoms persist, call a physician.

Skin contact Wash skin with soap and water. Use of moisturizer may be helpful.

Ingestion No adverse health effects anticipated by this route during proper industrial handling. In the event of ingestion, increase intake of liquid in order to flush from body. If symptoms persist, call a physician.

Inhalation Move to fresh air.

4.2 Most important symptoms and effects, both acute and delayed

Nuisance dust.

4.3 Indication of immediate medical attention and special treatment needed

Notes to physician None.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media Not flammable. Use extinguishing agent suitable for surrounding fire.
Extinguishing media which must not be used for safety reasons None.

5.2 Special hazards arising from the substance or mixture

None.

5.3 Advice for fire-fighters

Special protective equipment for firefighters As in any fire, wear self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid inhalation of dust by arranging adequate ventilation and use of an appropriate dust mask. Avoid excessive contact with the skin.
Other information Refer to Section 13 for disposal considerations.

6.2 Environmental Precautions

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Use any feasible mechanical means (e.g. vacuuming, absorbent material).

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling Minimize inhalation of dust and contact with the skin. Take precautionary measures against static discharges.

7.2 Conditions for safe storage, including any incompatibilities

Storage To guarantee the quality and properties of the product keep protected from humidity and bad weather conditions. Avoid prolonged storage. Product may be packaged in normal commercial packaging; paper or plastic material. Do not store flexible containers on top of each other. Caution: The stacking height must not exceed 3 pallets. Refer to the detailed list of incompatible materials (Section 10 "Stability/Reactivity").

7.3 Specific end uses

Specific uses Take precautions against the discharge of static electricity during powder handling operations.

Exposure scenario None required as substance is not hazardous.

Other guidelines None.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure limits

Chemical Name	EU	The United Kingdom	France	Spain	Germany
Titanium dioxide		STEL: 30 mg/m³ STEL: 12 mg/m³ TWA: 10 mg/m³ TWA: 4 mg/m³	VME: 10 mg/m³ 5 mg/m³ (a)	VLA-ED: 10 mg/m³	

Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
Titanium dioxide		TWA: 10 mg/m³	MAC: 10 mg/m³ MAC		TWA: 6 mg/m³

Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Titanium dioxide	STEL 10 mg/m³ MAK: 5 mg/m³	MAK: 3 mg/m³	NDS: 10.0 mg/m³	TWA: 5 mg/m³ STEL: 10 mg/m³	TWA: 10 mg/m³ (respirable fraction)

Chemical Name	Belgium	Czech Republic	Greece	Sweden	United States
Titanium dioxide	TWA: 10 mg/m³		TWA: 10 mg/m³ TWA: 5 mg/m³	5 mg/m³ (total dust)	TLV-TWA: 10 mg/m³ TWA: 15 mg/m³

Derived No Effect Level (DNEL) 10 mg/m³

Predicted No Effect Concentration (PNEC) Marine water: >1 mg/l; sediment: >100 mg/kg
Freshwater: = 0.127 mg/l; sediment: >1000 mg/kg

8.2 Exposure controls

Appropriate engineering controls Good natural ventilation will be sufficient in most circumstances. Local exhaust ventilation may be necessary if airborne dust concentration approaches the exposure limit.

Personal protective equipment

Eye protection Safety glasses with side-shields or goggles.

Hand protection Impervious gloves.

Skin and body protection Long sleeved clothing.

Respiratory protection In the event of insufficient ventilation: Respiratory protective device with a particles filter.

Environmental exposure controls Do not allow material to contaminate ground water system.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	White
Odor	None
pH	Not applicable
Melting Point/Range	1830 °C
Boiling Point/Range	No information available
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not applicable
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Specific Gravity	4.1
Solubility	Insoluble in ether
Water Solubility	Insoluble in water
Solubility in other solvents	Insoluble in ether
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	Not applicable
Decomposition Temperature	No data available
Viscosity	Not applicable
Explosive Properties	Not applicable
Oxidizing Properties	Not applicable

9.2 Other information

VOC Content(%)	None

10. STABILITY AND REACTIVITY

10.1 Reactivity

Not reactive.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

None.

10.5 Incompatible Materials

None.

10.6 Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product information These products do not present an acute toxicity hazard based on known or supplied information.

Irritation Same as a nuisance dust.

Ingestion No known toxic effect.

Skin contact No known toxic effect.

Inhalation No known toxic effect.

Eye contact No known toxic effect.

Corrosivity Individuals with sensitive skin may experience skin drying on prolonged or repeated exposure.

Component information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Titanium dioxide	10000 mg/kg (Rat)		

Key
Rat = Rat

Chronic effects

Carcinogenicity 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.

Sensitisation No evidence of skin or respiratory sensitisation.

Mutagenic effects None known.

Reproductive toxicity None known.

Developmental toxicity None known.

STOT - single exposure Not classified.

STOT - repeated exposure Not classified.

Target organ effects 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.

Aspiration hazard None known.

Endocrine disruptor information These products do not contain any known or suspected endocrine disruptors.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ecotoxicity effects — None known.

12.2 Persistence and degradability — Titanium dioxide is persistent and does not biodegrade

12.3 Bioaccumulative potential

Does not bioaccumulate.

12.4 Mobility in soil

There is no evidence of mobility of these products (solid particles).

12.5 Results of PBT and vPvB assessment

Not PBT and not vPvB.

12.6 Other adverse effects

No information available

12.7 Other information

No information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment

Waste from residues/unused products — These products are not considered hazardous for disposal into sanitary landfill or industrial waste disposal landfill. Please review appropriate national and local waste regulations.

Contaminated packaging — Contaminated packages are not considered hazardous for disposal into sanitary landfill or industrial waste disposal landfill. Please review appropriate national and local waste regulations.

EWC Waste Disposal No — EWC Code: 06 11 99. Not classified as a hazardous waste.

14. TRANSPORT INFORMATION

IMDG/IMO — Not regulated

RID — Not regulated

ADR — Not regulated

ICAO — Not regulated

IATA — Not regulated

15. REGULATORY INFORMATION

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

In accordance with local and national regulations:
These products are not classified as dangerous according to Directives 67/548/EEC and 1999/45/EC
Symbol(s) None.

International Inventories

USA (TSCA)	Complies
European Union (EINECS)	Complies
Canada (DSL/NDSL)	Complies
Philippines (PICCS)	Complies
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korea (KECL)	Complies
New Zealand (NZIoC)	Complies

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

15.2 Chemical safety assessment

No chemical safety assessment done because the product is not hazardous

16. OTHER INFORMATION

Sources of key data used to compile the safety data sheet.	REACH Registration dossier and chemical safety report. www.ChemADVISOR.com/

Revision note

Reason for revision	Initial Release. Brand name change only from Cristal to TiONA.

Disclaimer

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None of the substances in the products referred to in this document are classified as hazardous or dangerous according to Regulation (EC) No. 1272/2008. Therefore according to Regulation (EC) No. 453/2010 (REACH Annex II), there is no legal requirement to provide a Safety Data Sheet.

End of Data Sheet