

SAFETY DATA SHEET

Issuing Date
10-23-2007

Revision Date
05-12-2012

Revision Number
6.01

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product code
Product name
Formula

Cristal ACTIV™DT-52
Doped Titanium Dioxide
TiO₂

Substance or mixture
Recommended use

Mixture
Substrate for catalysts.

Company

Cristal France SAS
95, rue du Général de Gaulle
68800 THANN
France
Phone number: +33 (0) 389 38 4874

E-mail Address regulatory.query@cristal.com

Emergency Telephone Number +32 (0) 3-575-5555 - for Europe, Africa and Midle East

2. HAZARDS IDENTIFICATION

Not a hazardous substance or preparation according to EU-directives 67/548/EEC or 1999/45/EC.

Most Important Hazards

Physical-Chemical Properties No particular fire or explosion hazard.

Properties Affecting Health 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 animal studies. Not expected to present a significant acute health hazard upon short term exposure.

Environmental Properties If released to the environment, will cause white staining of waterways, vegetation and soil.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	EC No.	REACH Reg. No.	Weight %	Classification
Titanium dioxide	13463-67-7	236-675-5	01-2119489379-17-00 01	88-92	-
Tungstic oxide	1314-35-8	215-231-4	01-2119489176-27-00 04	8-12	-

4. FIRST AID MEASURES

Eye contact	IMMEDIATELY rinse with plenty of water for a prolonged period (at least 15 minutes) whilst keeping the eyes wide open. If eye irritation persists, consult a specialist.
Skin contact	Wash skin with soap and water.
Ingestion	Clean mouth with water.
Inhalation	Move victim to fresh air. Should breathing difficulties persist call the doctor.
Notes to physician	If possible show him this sheet. Failing this, show him the packaging or label.
Protection of First-aiders	Respiratory protection with a particle filter.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	All extinguishing agents can be used.
Extinguishing media which must not be used for safety reasons	None. If there is a fire close by, use media suitable for other burning materials.
Special Exposure Hazards Arising from the Substance/Preparation Including Combustion Products and Gases	None in particular.
Special protective equipment for firefighters	As in any fire, wear self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Environmental Precautions	Control the dusts with a fine water spray. Do not flush into surface water or sanitary sewer system.
Personal Precautions	Use personal protective equipment. Avoid contact with eyes. Safety glasses. Respiratory protection device with a particles filter. Do not breathe dust.
Methods for cleaning up	Sweep up or vacuum up the product. If necessary, wash with water following recovery.
Other information	Even when present in trace quantities (highly diluted liquid) it may give the cleaning water a white colour.

7. HANDLING AND STORAGE

Handling

Provide appropriate exhaust ventilation at places where dust is formed. Dust extraction (suction). Avoid the formation or spread of dust in the atmosphere.

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. Caution: The stacking height must not exceed 3 pallets. Do not store flexible containers on top of each other. Refer to the detailed list of incompatible materials (section 10 "Stability/Reactivity").

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Chemical Name	EU	The United Kingdom	France	Spain	Germany
Titanium dioxide 13463-67-7		STEL: 30 mg/m ³ STEL: 12 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³	VME: 10 mg/m ³	VLA-ED: 10 mg/m ³	
Tungstic oxide 1314-35-8		STEL: 10 mg/m ³ STEL: 3 mg/m ³ TWA: 1 mg/m ³ TWA: 5 mg/m ³		VLA-EC: 10 VLA-EC: 3 VLA-ED: 1 VLA-ED: 5	

Chemical Name	Italy	Portugal	The Netherlands	Finland	Denmark
Titanium dioxide 13463-67-7		TWA: 10 mg/m ³	MAC: 10 mg/m ³ MAC		TWA: 6 mg/m ³
Tungstic oxide 1314-35-8		STEL: 3 mg/m ³ STEL: 10 mg/m ³ TWA: 1 mg/m ³ TWA: 5 mg/m ³		TWA: 1 mg/m ³ TWA: 5 mg/m ³	TWA: 1 mg/m ³ TWA: 5 mg/m ³

Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Titanium dioxide 13463-67-7	STEL 10 mg/m ³ MAK: 5 mg/m ³	MAK: 3 mg/m ³	NDS: 10.0 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 10 mg/m ³ (respirable fraction)
Tungstic oxide 1314-35-8	STEL 10 STEL 2 MAK: 1 MAK: 5	MAK: 1 MAK: 5	NDS: 1 mg/m ³ NDS: 5 mg/m ³	TWA: 1 mg/m ³ TWA: 5 mg/m ³ STEL: 10 mg/m ³ STEL: 3 mg/m ³	

Chemical Name	Belgium	Czech Republic	Greece	Sweden	United States
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³		TWA: 10 mg/m ³ TWA: 5 mg/m ³	5 mg/m ³ (total dust)	TLV-TWA: 10 mg/m ³ TWA: 15 mg/m ³
Tungstic oxide 1314-35-8	TWA: 1 mg/m ³ TWA: 5 mg/m ³ STEL: 10 mg/m ³ STEL: 3 mg/m ³				TLV-STEL: 10 mg/m ³ TLV-STEL: 3 mg/m ³ = 1 mg/m ³ TWA = 5 mg/m ³ TWA

Occupational Exposure Controls

Engineering measures

Ensure adequate ventilation, especially in confined areas. Extraction to remove dust at its source.

Personal Protective Equipment

Respiratory protection

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

Eye protection

Safety glasses with side-shields or goggles.

Skin and body protection

Long sleeved clothing.

Hand protection Protective gloves.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State	Solid, fine powder	Appearance	White
Odor	None		
Important Health, Safety and Environmental Information			
Flash Point	Not applicable	Boiling Point/Range	Not applicable
pH	Aqueous suspension 10g/100ml 1.2 - 3.0	Autoignition Temperature	Not applicable
Vapor Pressure	Not applicable	VOC Content(%)	Not applicable
Viscosity	Not applicable	Solubility	Pratically insoluble in common organic solvents
Water Solubility	Dispersible (without solubilisation)	Specific Gravity	4000 kg/m ³ Approx. at 20° C
Evaporation Rate	Not applicable	Vapor Density	Not applicable
Bulk Density	600-900 kg/m ³	Flammability Limits in Air	Not applicable

Other Information

Melting Point/Range > 1600 °C

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Conditions to avoid No dangerous reactions known under normal conditions of use.

Materials to avoid None in particular.

Hazardous decomposition products None under normal use.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product information 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.

Inhalation Slightly irritating to the respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects

Persistence and degradability	Inert mineral product. Not degradable. Ultimate destination of the product : Soil and Sediment.
Bioaccumulative potential	No information available.
Mobility	Slightly soluble product, readily forms deposits.

13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products	Dispose of in accordance with local regulations. Consult the manufacturer or supplier for information regarding recovery and recycling of the product.
Contaminated packaging	Clean with water. Incinerate at an installation suitable for this type of packaging.
Other Information	The user is advised that specific restrictions and local instructions concerning the elimination of this product may exist.

14. TRANSPORT INFORMATION

IMDG/IMO Marine Pollutant	Not regulated No
RID	Not regulated
ADR	Not regulated
ICAO	Not regulated
IATA Note	Not regulated The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with the Millennium Inorganic Chemicals commercial agency.

15. REGULATORY INFORMATION

Not a hazardous substance or preparation according to EU-directives 67/548/EEC or 1999/45/EC.

Labeling

Symbol(s) Not dangerous.

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/NDL - 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

16. OTHER INFORMATION

Issuing Date	10-23-2007
Revision Date	05-12-2012
Reason for revision	Company Logo. E-mail Address
Recommendations on Use	This product is only intended for industrial use.

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.

Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.