

Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Toner Cartridge PTC A410W1-22
 Product Code: PTC
 Relevant identified uses: For electrophotographic apparatus
 Supplier: IMEX Co., Ltd.
 Address: 1630-8 Mitsutakazu, Kita-ku, Okayama-Shi, Okayama 709-2124, Japan
 Telephone number: +81-86-724-4402 FAX number: +81-86-724-2077
 E-mail address: msds@imex-net.co.jp

SECTION 2 HAZARDS IDENTIFICATION

2.1 Emergency Overview:

White fine powder with little or no odor.

Risk of dust-explosion if finely dispersed in air with an ignition source.

2.2 OSHA Regulatory Status:

Classification under GHS: Not classified

GHS Label Elements: None

2.3 Potential Health Effects:

No significant hazards known. See SECTION 11 for details

2.4 Potential Environmental Effects:

The ingredient "Zinc (II) complex salt" is classified as "Aquatic Acute 1" and "Aquatic Chronic 1" (very toxic to aquatic life) by GHS. This mixture, however, has shown enough test data to be classified out of these hazards. -See SECTION 12 for details

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Identification of Substance/Mixture: Mixture

Ingredient Name	Weight %	CAS No.
Saturated polyester resin	40-50	Confidential
Titanium dioxide	40-50	13463-67-7
Silica	1-4	67762-90-7
Wax	1-4	Confidential
Zinc (II) complex salt*	<1.0	42405-40-3

* Zinc, (bis[3,5-di(tert-butyl)-2-hydroxybenzoato-O1,O2],(T-4)

SECTION 4 FIRST AID MEASURES

- Inhalation:** Move to fresh air and gargle with water.
If accompanied with breathing difficulty, take first aid measures such as artificial respiration and call a physician immediately.
- Skin contact:** Wash with soap and water.
- Eye contact:** Do not rub. Flush with large amount of water until particles are removed.
Seek medical advice.
- Ingestion:** Rinse mouth. Seek medical advice.
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SECTION 5 FIREFIGHTING MEASURES

- 5.1 Suitable Extinguishing media:**
Water spray or fog, CO₂, dry chemicals
- 5.2 Unsuitable Extinguishing media:**
Strong water current may cause powder to disperse and form explosive dust-air mixture.
- 5.3 Protection of firefighters**
Specific hazards arising from the chemical:
Fine powder may form explosive dust-air mixture if finely dispersed in air.
Fume and smoke may include toxic substances such as aromatic compounds.
Protective equipment and precautions for firefighters
Avoid inhalation of fume and smoke.
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SECTION 6 ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures:**
Avoid breathing dust. Dust-proof masks should be worn when working.
- 6.2 Environmental precautions:**
Do not flush into sewer or natural watercourse.
- 6.3 Methods for containment:**
Keep in air-tight container.
- 6.4 Methods for cleaning up:**
Sweep the spilled powder slowly.
Clean the remainder with wet cloth, wet paper, or vacuum cleaner.
Vacuum cleaner must be equipped with dust proof filter and must be explosion-proof.
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SECTION 7 HANDLING AND STORAGE

- 7.1 Precautions for safe handling:**
Avoid breathing dust.
Keep away from ignition sources, especially where dust concentration may become high.
- 7.2 Conditions for safe storage, including any incompatibilities**
Store in a cool, dry location away from direct sunlight.
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SECTION 8 Exposure controls/personal protection**8.1 Control parameters:**

	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
As toner mixture	15mg/m ³ (Inhalable fraction) 5mg/m ³ (Respirable fraction)	N.E.	10mg/m ³ (Total dust) 3mg/m ³ (Respirable fraction)	N.E.
Silica	6mg/m ³	N.E.	10mg/m ³ (Total dust) 3mg/m ³ (Respirable fraction)	N.E.
Titanium dioxide	15mg/m ³ (Total dust) 5mg/m ³ (Respirable fraction)	N.E.	10mg/m ³	N.E.

(N.E.= Not Established)

8.2 Engineering controls:

Use of local ventilation is recommended.

8.3 Personal protective equipment:

Eye/face protection: Protective goggles should be used when handling bulk.
 Skin Protection: Protective clothing should be used when handling bulk.
 Respiratory protection: Dust-proof mask should be used when handling bulk.

SECTION 9 Physical and chemical properties**9.1 Information on basic physical and chemical properties:**

Appearance: White powder
 Odor: Slight odor
 pH: Not applicable
 Melting point: App. 150°C (Flow temperature)
Substance Zinc (II) complex salt: 242.7-244.2 °C
 Boiling point: No data
 Flash point: No data
 Evaporation rate: No data
 Flammability: Not flammable; Not classified
Substance Zinc (II) complex salt: Highly flammable. (Test method A10); Flam. Sol.1
 Explosive limits: No data
 Vapour pressure: Not applicable
 Vapour density: Not applicable
 Relative density: 1.1-1.3
 Solubility: Insoluble to water, partially soluble to toluene and xylene.
Substance Zinc (II) complex salt: 187.7mg/l in water, 478mg/100g Fat
Substance Titanium dioxide: Insoluble to water and fat
 Partition coefficient: Not available
Substance Zinc (II) complex salt: Log P_{ow}=2.32 at 18°C
 Auto-ignition temperature: Not applicable
 Decomposition temperature: >200°C
 Viscosity: Not applicable
 Explosive properties: Explosive dust-air mixture is formed when finely dispersed in air
 Oxidizing properties: Not available
Substance Zinc (II) complex salt: Oxidizing substance. (Max Burning Rate =1.98mm/s)
 Particle Size: app. 9.0µm (D₅₀)

9.1 Other information: None

SECTION 10 Stability and reactivity

10.1 Reactivity:	None
10.2 Possibility of hazardous reactions:	None
10.3 Chemical stability:	Stable
10.4 Conditions to avoid:	None
10.5 Incompatible materials:	None
10.6 Hazardous decomposition products:	No data

SECTION 11 Toxicological information**11.1 Information on toxicological effects:**

Acute toxicity: Not Classified

Substance Zinc (II) complex salt: Acute Tox. 4

Oral: LD₅₀(Rat): 1,800 mg/kg

Dermal: LD₅₀(Rat): >2,000 mg/kg

Inhalation: LC₅₀: Not available

Skin corrosion/irritation: Not available

Serious eye damage/irritation: Not classified as irritant

Skin sensitization: Not available

Germ cell mutagenicity: No data

Carcinogenicity: Not available

Titanium dioxide classified as "group 2B" by IARC, but the carcinogenicity of titanium dioxide is limited to lung overload conditions by dust inhalation tests. The content in this toner is considered to be modulated by their inclusion within the matrix of the mixture, not to be respirable by itself making the situation impossible to occur under intended use of this toner. Thus, carcinogenicity of this toner mixture is concluded to be "Not available".

Substance titanium dioxide: Substance is listed as group 2B by IARC from the results of inhalation tests to rats. This result is for excessive concentration of respirable dust of the substance causing lung overload of the rats, which results by exposure to other inert fine particles; thus, the effect assumed to have resulted by peculiar characteristics of rats' immune system. Epidemiological studies of titanium dioxide exposure to human do not show relationships to carcinogenic effects. Thus, enough data to classify carcinogenicity of titanium dioxide is concluded to be "Not available".

Reproductive toxicity: Not available, No constituent components are classified

STOT –single exposure: Not available, No constituent components are classified

STOT –RE: Not available

Aspiration hazards: Not available, No constituent components are classified

SECTION 12 Ecological information**12.1 Ecotoxicity**

Not classified

*Fish(Oryzias latipes): LC₅₀(96hr) > 100mg/L (WAF)**

*Crustaceans(Daphnia magna): EC₅₀(48hr) > 100mg/L (WAF)**

*Algae(Pseudokirchneriella subcapitata): E_rL₅₀(0-72h)>100 mg/L, NOELR=100mg/L (WAF)**

Substance Zinc (II) complex salt: Aquatic Acute 1

Fish(Oryzias latipes): LC₅₀(96hr): 5.5mg/L

Crustaceans(Daphnia magna): EC₅₀(48hr): 0.73mg/L (NOEL: 0.5mg/l)

Algae(Pseudokirchneriella subcapitata): E_bL₅₀(72h): 0.64mg/l, (NOEC: 0.20mg/l)

12.2 Persistence and degradability

Not available

Substance Zinc (II) complex salt: Not readily biodegradable. (15% after 28days)

12.3 Bioaccumulative potential

Not available

Substance Zinc (II) complex salt: Log P_{ow} =2.32; Not suspected to be bioaccumulative.

12.4 Mobility in soil

Not available

12.5 Other adverse effects:

Not available

**data from toner with similar composition*

SECTION 13 Disposal consideration

Dispose according to local authority requirements.

DO NOT release to sewer or natural watercourse.

DO NOT put toner cartridge, toner powder or container into fire.

SECTION 14 Transport information

Basic shipping description

UN number: None

UN proper shipping name: None

Transport hazard class(es): None

Packing group: None

Environmental hazards: Not classified as environmentally hazardous under UN Model Regulations and marine pollutant under IMDG Code.

Additional information:

Handling such as exposure to water, rolling, falling, or giving shock to the container may result in breakage of the inner bag and result in scattering of the mixture. Avoid direct sunlight and hot places. (See also: Section 7)

ADR / RID / ADN: not regulated

IMDG Code: not regulated

ICAO-TI / IATA-DGR: not regulated

SECTION 15 Regulatory information

Federal Regulations

TSCA: All ingredients are on the inventory or exempt from listing.

SARA Title III Section 313:

None

State Regulations:

California Proposition 65:

Substances "Titanium dioxide" and "Silica" included in this toner are listed, but only airborne, unbound particles of respirable size are subject to the regulation. Thus, their substances bound inside toner are not subject to the Proposition.

SECTION 16 Other information

Issued according to GHS 8th revised edition and ANSI Z400.1/Z129.1-2010

Indication of changes:

Dec. 9, 2021: First issued

Abbreviations:

CAS:	Chemical Abstract Service
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ACGIH:	American Conference of Governmental Industrial Hygienists
TLV:	Threshold Limit Value
TWA:	Time weighted Average
STEL:	Short Term Exposure Limit
LC ₅₀	Lethal Concentration to 50% of test population
LD ₅₀	Lethal Dose to 50% of test population
D ₅₀	volume-based median (50%) Diameter
IARC:	International Agency for Research on Cancer
STOT:	Specific Target Organ Toxicity
STOT RE	Specific Target Organ Toxicity –Repeated Exposure
WAF	Water Accommodated Fraction
EC ₅₀	Effective Concentration to 50% of test population
NOEC	No Observed Effect Concentration
E _r L ₅₀	Effective Loading rate that causes growth rate reduction to 50%
NOELR	No Observed Effect Loading Rate
E _b L ₅₀	Effective Loading rate that causes 50% reduction in algal cell biomass
PBT	Persistent, Bioaccumulative, and Toxic
UN	United Nations
ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
RID:	Regulations concerning the International Carriage of Dangerous Goods by Rail
ADN:	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG	International Maritime Dangerous Goods
IATA-DGR:	International Air Transport Association Dangerous Goods Regulations
ICAO-TI:	Technical Instructions for the Safe Transport of Dangerous Goods by Air
TSCA:	Toxic Substances Control Act
SNUR:	Significant New Use Rule
SARA:	Superfund Amendments and Reauthorization Act
ANSI:	American National Standard Institute

Although the information contained in this SDS is prepared to be accurate to the best of our knowledge, please be aware that health and hazard assessment may not be enough and complete.

Since SDS may be revised due to regulation changes or product modifications, please confirm if this is the latest version, especially if the revision date is outdated for two years.