













































**SECTION 8 Exposure controls/personal protection****8.1 Control parameters:**

	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
As toner mixture	15mg/m <sup>3</sup> (Inhalable fraction) 5mg/m <sup>3</sup> (Resipable fraction)	N.E.	10mg/m <sup>3</sup> (Total dust) 3mg/m <sup>3</sup> (Resipable fraction)	N.E.
Carbon black	3.5mg/m <sup>3</sup>	N.E.	3.5mg/m <sup>3</sup>	N.E.
Silica	6mg/m <sup>3</sup>	N.E.	10mg/m <sup>3</sup> (Total dust) 3mg/m <sup>3</sup> (Resipable fraction)	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 is recommended if necessary.  
 Skin Protection: Not required  
 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: Black powder  
 Odor: Slight odor  
 pH: Not applicable  
 Melting point: App. 140°C (Flow temperature)  
 Boiling point: No data  
 Flash point: No data  
 Evaporation rate: No data  
 Flammability: Not flammable (according to GHS classification)  
 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.  
 Partition coefficient: Not applicable  
 Auto-ignition temperature: Not applicable  
 Decomposition temperature: >200°C  
 Viscosity: Not applicable  
 Explosive properties: Can form explosive dust-air mixtures when finely dispersed in air  
 Oxidizing properties: Not applicable

**9.2 Other information:**Particle Size: app. 8.0µm (D<sub>50</sub>)

**SECTION 10 Stability and reactivity**

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

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

## Acute toxicity:

Inhalation: LC<sub>50</sub> ; inh-rat>1.45mg/L/4 hours\*, not harmful.  
(maximum achievable concentration)

Ingestion: LD<sub>50</sub> > 2000mg/kg\*, not harmful

## Irritation:

Eye: Not classified as irritant\* \*\*

Skin: Not classified as irritant\* \*\*

Corrosivity: Not available

Sensitisation: Not classified as a sensitizer\* \*\*

Carcinogenicity: Carbon black, contained in this toner, is classified as "group 2B" (possibly carcinogenic to humans) by IARC. However, long-term inhalation test on rats using a toner preparation containing carbon black did not show any carcinogenic effects.

Mutagenicity: Ames test negative\*

Reproductive toxicity: Not available

STOT –single exposure: Not available

STOT –RE: In study of rats exposed to a toner containing carbon black, mild degree of lung fibrosis was observed in groups exposed to high concentration(16mg/m<sup>3</sup>), and mid-concentration(4mg/m<sup>3</sup>), but no pulmonary change was reported in the group exposed to low concentration(1mg/m<sup>3</sup>).

In normal conditions of use (in electro-photographic apparatus,) maximum concentration of toner released is significantly lower than 1mg/m<sup>3</sup>, and will have no chronic effects to human health.

In cases where this product is used in bulk for purpose such as filling, cleaning, etc of the apparatus, exposure should be controlled with care according to Sections 7 and 8.

Aspiration hazards: Not available

\*data from toner with similar composition.

\*\*according to GHS classifications

**SECTION 12 Ecological information****12.1 Ecotoxicity**

Fish(*Oryzias latipes*): LC<sub>50</sub>(96hr) > 100mg/L (WAF)\*

Crustaceans(*Daphnia magna*): EC<sub>50</sub>(48hr) > 100mg/L (WAF)\*

Algae(*Pseudokirchneriella subcapitata*): ErL<sub>50</sub>(0-72h)>100 mg/L, NOELR=100mg/L (WAF)\*

**12.2 Persistence and degradability**

Not available

**12.3 Bioaccumulative potential**

Not available

**12.4 Mobility in soil**

Not available

**12.5 Other adverse effects:**

Not available

**SECTION 13 Disposal consideration**

Dispose according to local authority requirements.

DO NOT release to sewer or natural watercourse.

DO NOT put 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:

“Carbon black” included in this toner is listed, but only airborne, unbound particles of respirable size are subject to the regulation. Thus carbon black bound inside toner is not subject to the Proposition.

**SECTION 16 Other information**

Issued according to ANSI Z400.1/Z129.1-2010

**Indication of changes:**

Feb. 01 2019: 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 <sub>50</sub>	Lethal Concentration to 50% of test population
LD <sub>50</sub>	Lethal Dose to 50% of test population
D <sub>50</sub>	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 <sub>50</sub>	Effective Concentration to 50% of test population
NOEC	No Observed Effect Concentration
E <sub>r</sub> L <sub>50</sub>	Effective Loading rate that causes growth rate reduction to 50%
NOELR	No Observed Effect Loading Rate
E <sub>b</sub> L <sub>50</sub>	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 MSDS 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 MSDS 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.



---

# SAFETY DATA SHEET

SDS No.: KG37-01E

---

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### MATERIAL IDENTIFICATION:

Organic Photoconductor for KIP 700 Series

DISTRIBUTOR'S NAME: KATSURAGAWA ELECTRIC CO., LTD.  
DISTRIBUTOR'S ADDRESS: 21-1, Shimomaruko 4-Chome, Ota-ku, Tokyo 146-8585, Japan  
TELEPHONE NUMBER: 81-3-3758-3550  
FACSIMILE NUMBER: 81-3-3758-7568

DATE PREPARED: Feb. 1. 2019

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

This product is an "article".

<u>INGREDIENTS</u>	<u>CAS No.</u>	<u>PROPORTION</u>
Aluminum cylinder	-	>97%
Binder resin	-	<1%
Photosensitive material	-	<1%
Pigment	-	<1%

## 3. HAZARD IDENTIFICATION

### EMERGENCY OVERVIEW

Green, odorless and solid cylinder. None hazardous product.

### POTENTIAL HEALTH EFFECTS

Based on animal testing, this product is presumed to be no health effects.

#### 4. FIRST AID MEASURES

- EYES: No eye contact in normal use. If exposed to the dust of photoconductive layer, flush eyes with water. Get medical attention, if feels irritation.
- SKIN: None treatment is required. If exposed to much of the dust of photoconductive layer, wash out with water.
- INGESTION: No ingestion in normal use. If swallowed the dust of photoconductive layer, induce vomiting as much as possible. Get medical attention, if feels something bad.
- INHALATION: No inhalation in normal use. If exposed to the dust of photoconductive layer, get medical attention if cough or other symptoms develop.

#### 5. FIRE FIGHTING MEASURES

- EXTINGUISHING MEDIA: CO<sub>2</sub>, Dry chemical, Foam or Water
- FIRE-FIGHTING EQUIPMENT: Suitable personal protective equipment

#### 6. ACCIDENTAL RELEASE MEASURES

- PERSONAL PRECAUTIONS : None required under normal use.
- ENVIRONMENTAL PRECAUTIONS : None required under normal use.
- METHODS FOR CLEANING UP : Collect. No special precautions required in collection.

#### 7. HANDLING AND STORAGE

- HANDLING: No special precaution. Do not touch the photoconductive layer directly, expose to organic solvent vapor or sunlight to prevent degradation.
- STORAGE: Store in normal temperature, normal humidity and dark place. Avoid dew condensation, organic solvent vapor.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- OCCUPATIONAL EXPOSURE LIMIT: ACGIH Not established.  
OSHA Not established.
- ENGINEERING MEASURES: Not required.

##### PERSONAL PROTECTIVE EQUIPMENT:

- RESPIRATORY PROTECTION: None required.
- SKIN PROTECTION: No precautions.
- EYE PROTECTION: None.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Green and solid cylinder
ODOR:	Odorless
BOILING POINT:	Not applicable
VAP PRESS:	Not applicable
VAP DENSITY:	Not applicable
SP. GRAVITY:	2.7
SOL IN WATER:	Insoluble
SOL IN OTHER SOLVENT:	Photoconductive layer is soluble in organic solvent like tetrahydrofuran.
FLAMMABLE PROPERTIES:	Not applicable
FLASH POINT:	Not applicable
FLAMMABLE LIMITS	
LFL:	Not applicable
UFL:	Not applicable

## 10. STABILITY AND REACTIVITY

STABILITY:	Stable
HAZARDOUS DECOMPOSITION PRODUCTS:	None
HAZARDOUS POLYMERIZATION:	None

## 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:	oral (rat) LD50 >2,000mg/kg <sup>1)</sup> (Photoconductive layer)
	skin (rabbit) LD50 not available
SKIN IRRITATION:	No skin irritation was noted in the rabbit dermal toxicity study. <sup>1)</sup> (Photoconductive layer)
EYE IRRITATION:	No eye irritation was noted on the eyes of rabbits. <sup>1)</sup> (Photoconductive layer)
SENSITIZING:	Not available.
CHRONIC TOXICITY:	Not available.
MUTAGENICITY:	Negative in the Ames test. <sup>1)</sup> (Photoconductive layer)
CARCINOGENICITY:	IARC; , ACGIH; , NTP; Not available.
REPRODUCTIVE TOXICITY:	Not available.

## 12. ECOLOGICAL INFORMATION

No data available.

### 13. DISPOSAL CONSIDERATIONS

Any disposal practice should be done under conditions, which meet local, state and federal laws and regulations relating to waste (contact local or state environmental agency for specific rules).

### 14. TRANSPORT INFORMATION

UN Haz. Class:                   None allocated

UN No.:                           None

It is not regulated for air-transport IATA regulations.

### 15. REGULATORY INFORMATION

TSCA: This product do not fall in the category of the regulations and orders of section 6 and 7 of TSCA (Toxic Substance Control Act).

California Proposition 65:

This product contains no chemical substances subject to California Proposition 65.

Candidate List of SVHC (\*):

The product does not contain SVHC that are intentionally introduced.

(\* ) Candidate lists of substances of very high concern (released by ECHA)

ECHA, "Candidate List of Substances of Very High Concern for authorization", updated on 16/06/2014

### 16. OTHER INFORMATION

MSDS STATUS:                No special notes.

REFERENCES:

1) In-house data (Similar OPC)