

### 1. Identification of the Substance/Preparation and of the Company/Undertaking

**Product identifier****Product name** K-RAY® SM Molten Metal**Recommended use of the chemical and restrictions on use****Recommended use** Coloring agent.  
**Uses advised against** No information available**Details of the supplier of the safety data sheet****Supplier address**Kobo Products, Inc.  
3474 South Clinton Avenue  
South Plainfield, NJ 07080 USA  
Telephone: 1-908-757-0033**Emergency telephone number****Emergency telephone** Chemtrec 1-800-424-9300

### 2. Hazards Identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Carcinogenicity	Category 2
-----------------	------------

**Label elements****EMERGENCY OVERVIEW****WARNING****Hazard statements**

Suspected of causing cancer

**Appearance** Powder**Physical state** Solid**Odor** Characteristic**Precautionary Statements - Prevention**

Use personal protective equipment as required

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None known

**Other Information**

No information available

**3. Composition/information on Ingredients**

Chemical name	CAS No	Weight-%
Synthetic Fluorophlogopite	12003-38-2	39.00-64.00
Silica	7631-86-9	20.00-30.00
Titanium Dioxide	13463-67-7	15.00-25.00
Iron Oxides (CI 77491)	1309-37-1	1.00-5.00

**4. First aid measures****Description of first aid measures**

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Inhalation</b>	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration.
<b>Ingestion</b>	If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.
<b>Self-protection of the first aider</b>	Use personal protective equipment as required.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No known effects under normal use conditions.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

**5. Fire-fighting measures****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

None in particular.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Protective equipment and precautions for firefighters**

Use personal protective equipment as required.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Use personal protective equipment as required. Avoid contact with eyes. Wash thoroughly after handling.

**For emergency responders** Use personal protective equipment as required.

**Environmental precautions** Collect spillage. Do not allow into any sewer, on the ground or into any body of water.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Avoid creating dust. Sweep up and shovel into suitable containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and Storage

### Precautions for safe handling

**Advice on safe handling** Use personal protective equipment as required. Use only in well-ventilated areas. Wash thoroughly after handling.

### Conditions for safe storage, including any incompatibilities

**Storage conditions** Keep container tightly closed in a dry and well-ventilated place. Store at ambient conditions.

**Incompatible materials** Strong oxidizing agents. Strong acids.

## 8. Exposure Controls/Personal Protection

### Control parameters

#### Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silica	No data available	TWA: 20 mppcf : (80)/(% SiO <sub>2</sub> ) mg/m <sup>3</sup> TWA	IDLH: 3000 mg/m <sup>3</sup> TWA: 6 mg/m <sup>3</sup>
Titanium Dioxide	TWA: 0.2 mg/m <sup>3</sup> nanoscale respirable particulate matter TWA: 2.5 mg/m <sup>3</sup> finescale respirable particulate matter	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> total dust	IDLH: 5000 mg/m <sup>3</sup>
Iron Oxides (CI 77491)	TWA: 5 mg/m <sup>3</sup> respirable particulate matter	TWA: 10 mg/m <sup>3</sup> fume TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> fume and total dust Iron oxide (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction regulated under Rouge	IDLH: 2500 mg/m <sup>3</sup> Fe dust and fume TWA: 5 mg/m <sup>3</sup> Fe dust and fume

### Appropriate engineering controls

**Engineering controls** Ensure adequate ventilation, especially in confined areas.

**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and body protection</b>	Wear protective gloves and protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.

<b>9. Physical and Chemical Properties</b>
--

**Information on basic physical and chemical properties**

<b>Physical state</b>	Solid	<b>Odor</b>	Characteristic
<b>Appearance</b>	Powder	<b>Odor threshold</b>	No information available
<b>Color</b>	Pink		

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>		No information available
<b>Melting point / freezing point</b>		No information available
<b>Boiling point / boiling range</b>		No information available
<b>Flash point</b>		No information available
<b>Evaporation rate</b>		No information available
<b>Flammability (solid, gas)</b>		No information available
<b>Flammability limit in air</b>		
<b>Upper flammability limit</b>		No information available
<b>Lower flammability limit</b>		No information available
<b>Vapor pressure</b>		No information available
<b>Vapor density</b>		No information available
<b>Specific gravity</b>		No information available
<b>Water solubility</b>	Insoluble in water	
<b>Solubility in other solvents</b>		No information available
<b>Partition coefficient</b>		No information available
<b>Autoignition temperature</b>		No information available
<b>Hyphen</b>		No information available
<b>Kinematic viscosity</b>		No information available
<b>Dynamic viscosity</b>		No information available
<b>Explosive properties</b>		No information available
<b>Oxidizing properties</b>		No information available

**Other information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC content</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

<b>10. Stability and Reactivity</b>
-------------------------------------

**Reactivity**

No data available

**Chemical stability**

Stable under normal conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous polymerization** Hazardous polymerization does not occur.**Conditions to avoid**

None known.

**Incompatible materials**

Strong oxidizing agents. Strong acids.

**Hazardous decomposition products**

None under normal use conditions.

**11. Toxicological Information****Information on likely routes of exposure****Product information**

<b>Inhalation</b>	No data available.
<b>Eye contact</b>	No data available.
<b>Skin contact</b>	No data available.
<b>Ingestion</b>	No data available.

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Synthetic Fluorophlogopite	-	-	> 5 mg/L ( Rat ) 4 h
Silica	= 7900 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	> 58.8 mg/L ( Rat ) 4 h
Titanium Dioxide	> 10000 mg/kg ( Rat )	-	= 5.09 mg/L ( Rat ) 4 h
Iron Oxides (CI 77491)	> 10000 mg/kg ( Rat )	-	-

**Symptoms related to the physical, chemical and toxicological characteristics****Symptoms** No information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Irritation</b>	No information available.
<b>Corrosivity</b>	No information available.
<b>Sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium Dioxide	A3	Group 2B		X

*IARC (International Agency for Research on Cancer)**Group 2B - Possibly Carcinogenic to Humans**OSHA (Occupational Safety and Health Administration of the US Department of Labor)**X - Present*

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

## 12. Ecological Information

### Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Crustacea
Silica	440: 72 h Pseudokicheriella subcapitata mg/L EC50	= 5000: 96 h Brachydanio rerio mg/L LC50 static	7600: 48 h Ceriodaphnia dubia mg/L EC50
Iron Oxides (CI 77491)		= 100000: 96 h Danio rerio mg/L LC50 static	

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

### Other adverse effects

No information available

## 13. Disposal Considerations

### Waste treatment methods

#### **Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

#### **Contaminated packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## 14. Transport Information

**DOT** Not regulated

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

## 15. Regulatory information

### International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Not Determined
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

**Legend:**

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

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

<b>Acute health hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	No
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Titanium Dioxide	Carcinogen

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Titanium Dioxide	X	X	X
Iron Oxides (CI 77491)	X	X	X

**16. Other information**

<b><u>NFPA</u></b>	<b>Health hazards</b> 1	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b><u>HMIS</u></b>	<b>Health hazards</b> 1	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>PERSONAL PROTECTION</b> E

Issue date 26-Sep-2023  
 Revision date 26-Sep-2023  
 Revision note

**Disclaimer**

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

**End of Safety Data Sheet**