

## 1 Identification

### GHS Product Identifier

TAN05RCSS

### Other means of identification

5 MHz Quartz Monitor Crystals with Silver electrode and Chromium Adhesion Layer. Ulvac electrode pattern.

### Recommended use of the chemical and restriction on use

Quartz Monitor Crystals are a solid, non-volatile, component used for measuring thin film evaporation in optical coating applications.

### Supplier's details

Phillip Technologies, LLC  
 2003 Perimeter Road  
 Suite E  
 Greenville, South Carolina 29605-5276  
 USA

### Emergency phone number

+1-864-244-1560

## 2 Hazard(s) identification

### Classification of the substance or mixture

Quartz Monitor Crystals are **not hazardous** under OSHA Standard 29 CFR 1910.1200

### GHS label elements

May be harmful if swallowed due to choking hazard

## 3 Composition/information on ingredients

Description	CAS Number	EINECS Number	%	Note
Silver metal (Ag)	7440-22-4		20	Silver is natural element that is non-toxic, and non-volatile.
Chromium metal (Cr)	7440-47-3		10	Vacuum-deposited chromium transforms into inert and non-volatile Chromic Oxide, which is what these crystals are coated with
Silicon Dioxide (Quartz)	14808-60-7		70	Quartz is pervasive in nature. Non-toxic, non-volatile.

## 4 First-aid measures

### Description of necessary first-aid measures

Call a doctor in the event of oral ingestion. Possible choking hazard may exist.

### Most important symptoms/effects, acute and delayed

choking hazard due to oral ingestion. Possible upset stomach from ingestion.

**Indication of immediate medical attention and special treatment needed, if necessary**

Choking, difficulty breathing, or illness.

**5 Fire-fighting measures**

**Suitable extinguishing media**

Not Applicable

**Specific hazards arising from the chemical**

Not Applicable

**Special protective actions for fire-fighters**

Not Applicable

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

Not Applicable

**Environmental precautions**

Not Applicable

**Methods and materials for containment and cleaning up**

Not Applicable. Product is solid, non-toxic, non-volatile, and non-flammable

**7 Handling and storage**

**Precautions for safe handling**

None.

**Conditions for safe storage, including any incompatibilities**

None

**8 Exposure controls/personal protection**

**Control parameters**

No PPE required for handling.

**Appropriate engineering controls**

No controlled procedures required for safe handling.

**Individual protection measures**

No PPE required for handling.

**9 Physical and chemical properties**

**Physical and chemical properties**

<b>Physical state</b>	Solid	<b>Odor</b>	No Odor
<b>Appearance</b>	Silver and Metallic Grey	<b>Odor Threshold</b>	No information available
<b>Color</b>			

<u>Property</u>	<u>Values</u>	<u>Remarks Method</u>
pH	no data available	None Known
Melting/Freezing Point	1670°C	None Known
boiling Point/Boiling range	no data available	None Known
Flash Point	no data available	None Known
Evaporation Rate	no data available	None Known
Flammability (solid / gas)	no data available	None Known
Flammability Limit in Air	no data available	None Known
Upper Flammability Limit	no data available	None Known
Lower Flammability Limit	no data available	None Known
Vapor Pressure	no data available	None Known
Vapor Density	no data available	None Known
Specific Gravity	60.08	None Known
Water Solubility	Non-soluble	None Known
Solubility in other solvents	no data available	None Known
Partition coefficient: n-octanol/wate	no data available	None Known
Autoignition temperature	no data available	None Known
Decomposition temperature	no data available	None Known
Kinematic viscosity	no data available	None Known
Dynamic viscosity	no data available	None Known
Explosive properties	no data available	None Known
Oxidizing properties	no data available	None Known

## 10 Stability and reactivity

### Reactivity

None under normal processing

### Chemical stability

Stable under all storage and usage conditions

### Possibility of hazardous reactions

None under normal processing

### Conditions to avoid

None

### Incompatible materials

None

### Hazardous decomposition products

None

## 11 Toxicological information

### Toxicological (health) effects

None.

### Numerical measures of toxicity (such as acute toxicity estimates)

### Toxicological Data on Ingredients:

**Ingredient**

Quartz  
Silver  
Chromium

**LD50**

Not available  
Not available  
Not available

**LC50**

Not available  
Not available  
Not available

**Interactive effects**

None

**Where specific chemical data are not available**

None

**Mixtures**

None

**Mixture versus ingredient information**

None

**Other information**

None

**Information on the likely routes of exposure**

None

**Symptoms related to the physical, chemical and toxicological characteristics**

Potential Choking Hazard

**Delayed and immediate effects and also chronic effects from short and long term exposure**

None

**12 Ecological information****Toxicity**

None

**Persistence and degradability**

None

**Bioaccumulative potential**

None

**Mobility in soil**

None

**Other adverse effects**

None

**13 Disposal considerations****Disposal methods**

Bury in a secured landfill in accordance with all local, state and federal environmental regulations.  
Empty containers may be incinerated or discarded as general trash.

## 14 Transport information

### UN Number

Not available

### UN Proper Shipping Name

Not available

### Transport hazard class(es)

Not available

### Environmental hazards

Not available

### Special precautions for user

Not available

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available

## 15 Regulatory information

### Safety, health and environmental regulations specific for the product in question

**CLEAN AIR ACT SECTION 611:** Material neither contains nor is it manufactured with ozone depleting substances (ODS).

**FEDERAL WATER POLLUTION CONTROL ACT (40 CFR 401.15):** Material contains no intentionally added or detectable (contaminant) levels of EPA priority toxic pollutants.

**CERCLA REPORTABLE QUANTITY:** None

**OSHA:** Not hazardous under 29 CFR 1910.1200

**RCRA:** Not a hazardous material or a hazardous waste by listing or characteristic.

**Extremely Hazardous Substances:** None

**Section 311/312, Hazardous Categories:** Non-hazardous

Contains no VOCs.

## 16 Other information