

# Safety Data Sheet

## Tin for Gold Concentrate – C2070

SDS Revision Date:

05/16/2017

### 1. Identification

#### 1.1. Product identifier

**Product Identity**

Tin for Gold Concentrate – C2070

**Alternate Names**

Tin for Gold Concentrate – C2070

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Intended use**

Commercial mirroring.

#### 1.3. Details of the supplier of the safety data sheet

**Company Name**

Angel Gilding  
1945 Gardner Road  
Broadview IL 60155 USA

**Emergency**

**24 hour Emergency Telephone No.**

708-383-3340

**Customer Service: Angel Gilding**

708-383-3340

### 2. Hazard(s) identification

#### 2.1. Classification of the substance or mixture

Acute Tox. 4;H302

Harmful if swallowed.

Acute Tox. 4;H332

Harmful if inhaled.

Skin Corr. 1A;H314

Causes severe skin burns and eye damage.

Eye Dam. 1;H318

Causes serious eye damage.

STOT SE 3;H335

May cause respiratory irritation.

#### 2.2. Label elements



**Danger**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

# Safety Data Sheet

## Tin for Gold Concentrate – C2070

SDS Revision Date:

05/16/2017

### [Prevention]:

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

### [Response]:

P301+312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P330 IF SWALLOWED: Rinse mouth.

P331 Do NOT induce vomiting.

P363 Wash contaminated clothing before reuse.

### [Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

### [Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

## 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Hydrochloric acid CAS Number: 0007647-01-0	10 - 25	Skin Corr. 1B;H314 STOT SE 3;H335	[1][2]
Stannous chloride dihydrate CAS Number: 0010025-69-1	10 - 25	Acute Tox. 4;H302 Skin Corr. 1B;H314 Aquatic Acute 1;H400	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

\*The full texts of the phrases are shown in Section 16.

# Safety Data Sheet

## Tin for Gold Concentrate – C2070

SDS Revision Date:

05/16/2017

### 4. First aid measures

#### 4.1. Description of first aid measures

<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
<b>Inhalation</b>	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
<b>Eyes</b>	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
<b>Skin</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
<b>Ingestion</b>	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

#### 4.2. Most important symptoms and effects, both acute and delayed

<b>Overview</b>	<p>Inhalation: Corrosive! Inhalation of vapors can cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract, and in severe cases, pulmonary edema, circulatory failure, and death.</p> <p>Ingestion: Corrosive! Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract. May cause nausea, vomiting, and diarrhea. Swallowing may be fatal.</p> <p>Skin Contact: Corrosive! Can cause redness, pain, and severe skin burns. Concentrated solutions cause deep ulcers and discolor skin.</p> <p>Eye Contact: Corrosive! Vapors are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.</p> <p>Chronic Exposure:</p> <p>Long-term exposure to concentrated vapors may cause erosion of teeth. Long term exposures seldom occur due to the corrosive properties of the acid.</p> <p>Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye disease may be more susceptible to the effects of this substance.</p> <p>See section 2 for further details.</p>
<b>Inhalation</b>	Harmful if inhaled. May cause respiratory irritation.
<b>Eyes</b>	Causes serious eye damage.
<b>Skin</b>	Causes severe skin burns and eye damage.
<b>Ingestion</b>	Harmful if swallowed.

### 5. Fire-fighting measures

#### 5.1. Extinguishing media

If involved in a fire, use water spray. Neutralize with soda ash or slaked lime.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: When heated to decomposition, emits toxic hydrogen chloride fumes and will react with water or steam to produce heat and toxic and corrosive fumes. Thermal oxidative decomposition produces toxic chlorine fumes and explosive hydrogen gas.

# Safety Data Sheet

## Tin for Gold Concentrate – C2070

SDS Revision Date:

05/16/2017

Avoid breathing dust / fume / gas / mist / vapors / spray.

### 5.3. Advice for fire-fighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Structural firefighter's protective clothing is ineffective for fires involving hydrochloric acid. Stay away from ends of tanks. Cool tanks with water spray until well after fire is out.

ERG Guide No. 157

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

### 6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### 6.3. Methods and material for containment and cleaning up

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use nonsparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

Contain, dilute cautiously with water, and neutralize with soda ash or lime.

## 7. Handling and storage

### 7.1. Precautions for safe handling

Storage facilities must be properly designed and diked to contain any spillage.

See section 2 for further details. - [Prevention]:

### 7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Protect from physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Do not wash out container and use it for other purposes. When diluting, the acid should always be added slowly to water and in small amounts. Never use hot water and never add water to the acid. Water added to acid can cause uncontrolled boiling and splashing. When opening metal containers, use non-sparking tools because of the possibility of hydrogen gas being present. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

Incompatible materials: A strong mineral acid, concentrated hydrochloric acid is incompatible with many substances and highly reactive with strong bases, metals, metal oxides, hydroxides, amines, carbonates and other alkaline materials. Incompatible with materials such as cyanides, sulfides, sulfites, formaldehyde, sodium, potassium, bromine trifluoride, calcium carbide, calcium acetylide, ethylene oxide, and nitrates. Reacts with hydrazine hydrate to form

# Safety Data Sheet

## Tin for Gold Concentrate – C2070

SDS Revision Date:

05/16/2017

dihydrazine chloride, which decomposes explosively when heated. Contact with strong oxidizing agents or alkalis will generate heat and fumes.

See section 2 for further details. - [Storage]:

### 7.3. Specific end use(s)

No data available.

## 8. Exposure controls and personal protection

### 8.1. Control parameters

#### Exposure

CAS No.	Ingredient	Source	Value
0007647-01-0	Hydrochloric acid	OSHA	C 5 ppm (7 mg/m <sup>3</sup> )
		ACGIH	Ceiling: 2 ppm Revised 2003,
		NIOSH	C 5 ppm (7 mg/m <sup>3</sup> )
		Supplier	No Established Limit
0010025-69-1	Stannous chloride dihydrate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

### 8.2. Exposure controls

#### Respiratory

If the exposure limit is exceeded, a full facepiece respirator with an acid gas cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a fullfacepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

#### Eyes

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

#### Skin

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear PVC or rubber gloves to keep skin contact to a minimum. Refer to the manufacturer's recommendations regarding the suitability of any gloves used.

#### Engineering Controls

Forced Mechanical Exhaust Recommended

#### Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

## 9. Physical and chemical properties

#### Appearance

Colorless solution. Liquid

# Safety Data Sheet

## Tin for Gold Concentrate – C2070

SDS Revision Date:

05/16/2017

<b>Odor</b>	Pungent odor of hydrogen chloride.
<b>Odor threshold</b>	Not determined
<b>pH</b>	0.1
<b>Melting point / freezing point</b>	-30 °C
<b>Initial boiling point and boiling range</b>	100 °C
<b>Flash Point</b>	Not Measured
<b>Evaporation rate (Ether = 1)</b>	Not Measured
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> Not Measured <b>Upper Explosive Limit:</b> Not Measured
<b>Vapor pressure (Pa)</b>	190 @ 25C (mm Hg)
<b>Vapor Density</b>	Not Measured
<b>Specific Gravity</b>	Not Measured
<b>Solubility in Water</b>	Complete
<b>Partition coefficient n-octanol/water (Log Kow)</b>	Not Measured
<b>Auto-ignition temperature</b>	Not Measured
<b>Decomposition temperature</b>	Not Measured
<b>Viscosity (cSt)</b>	Not Measured
<b>Density</b>	1 (g cm-3)

### 9.2. Other information

No other relevant information.

## 10. Stability and reactivity

### 10.1. Reactivity

Powerful reducing agent. Absorbs oxygen from air and forms the insoluble oxychloride. Forms an insoluble basic salt when dissolved with much water.

### 10.2. Chemical stability

Stable under normal circumstances.

### 10.3. Possibility of hazardous reactions

No data available.

### 10.4. Conditions to avoid

Heat, direct sunlight and incompatibles.

Self-contained breathing apparatus should be used to prevent inhalation of gases. Water fog will be most effective for controlling vapors.

### 10.5. Incompatible materials

A strong mineral acid, concentrated hydrochloric acid is incompatible with many substances and highly reactive with strong bases, metals, metal oxides, hydroxides, amines, carbonates and other alkaline materials. Incompatible with materials such as cyanides, sulfides, sulfites, formaldehyde, sodium, potassium, bromine trifluoride, calcium carbide, calcium acetylide, ethylene oxide, and nitrates. Reacts with hydrazine hydrate to form dihydrazine chloride, which decomposes explosively when heated. Contact with strong oxidizing agents or alkalis will generate heat and fumes.

### 10.6. Hazardous decomposition products

# Safety Data Sheet

## Tin for Gold Concentrate – C2070

SDS Revision Date:

05/16/2017

When heated to decomposition, emits toxic hydrogen chloride fumes and will react with water or steam to produce heat and toxic and corrosive fumes. Thermal oxidative decomposition produces toxic chlorine fumes and explosive hydrogen gas.

### 11. Toxicological information

#### Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Hydrochloric acid - (7647-01-0)	900.00, Rabbit - Category: 4	5,010.00, Rabbit - Category: NA	781.00, Mouse - Category: NA	No data available	3,124.00, Rat - Category: 4
Stannous chloride dihydrate - (10025-69-1)	No data available	No data available	No data available	No data available	No data available

#### Carcinogen Data

CAS No.	Ingredient	Source	Value
0007647-01-0	Hydrochloric acid	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
0010025-69-1	Stannous chloride dihydrate	OSHA	Regulated Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

Classification	Category	Hazard Description
Acute toxicity (oral)	4	Harmful if swallowed.
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	1A	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	3	May cause respiratory irritation.
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

# Safety Data Sheet

## Tin for Gold Concentrate – C2070

SDS Revision Date:

05/16/2017

### 12. Ecological information

**12.1. Toxicity**

No additional information provided for this product. See Section 3 for chemical specific data.

**Aquatic Ecotoxicity**

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Hydrochloric acid - (7647-01-0)	282.00, Gambusia affinis	260.00, Crangon crangon	Not Available
Stannous chloride dihydrate - (10025-69-1)	Not Available	Not Available	Not Available

**12.2. Persistence and degradability**

There is no data available on the preparation itself.

**12.3. Bioaccumulative potential**

Not Measured

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

This product contains no PBT/vPvB chemicals.

**12.6. Other adverse effects**

No data available.

### 13. Disposal considerations

**13.1. Waste treatment methods**

Observe all federal, state and local regulations when disposing of this substance.

### 14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
<b>14.1. UN number</b>	UN1789	UN1789	UN1789
<b>14.2. UN proper shipping name</b>	UN1789, Hydrochloric acid, 8, II	Hydrochloric acid	Hydrochloric acid
<b>14.3. Transport hazard class(es)</b>	<b>DOT Hazard Class: 8</b>	<b>IMDG: 8 Sub Class: Not Applicable</b>	<b>Air Class: 8</b>
<b>14.4. Packing group</b>	II	II	II
<b>14.5. Environmental hazards</b>			



# Safety Data Sheet

## Tin for Gold Concentrate – C2070

SDS Revision Date:

05/16/2017

IMDG Marine Pollutant: No;

### 14.6. Special precautions for user

No further information

## 15. Regulatory information

**Regulatory Overview** The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

**Toxic Substance Control Act ( TSCA)** All components of this material are either listed or exempt from listing on the TSCA Inventory.

**WHMIS 1988** D2B E

### Classification

#### US EPA Tier II Hazards

**Fire:** No

**Sudden Release of Pressure:** No

**Reactive:** No

**Immediate (Acute):** Yes

**Delayed (Chronic):** No

#### EPCRA 302 Extremely Hazardous:

Hydrochloric acid

#### EPCRA 313 Toxic Chemicals:

Hydrochloric acid

#### Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

## 16. Other information

SDS Revision Date 05/16/2017

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

**Safety Data Sheet**  
**Tin for Gold Concentrate – C2070**

**SDS Revision Date:**

**05/16/2017**

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

IMPORTANT NOTE: This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Document