

# Material Safety Data Sheet

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## Section 1: Product Identification

**MSDS Code: 41605**

**Name: Catalyst, Part B**

**Related Part Numbers: 41605-250ML**

Use: For use in Tank # 3 in the MG Electroless Copper-Plating System.

## Section 2: Hazardous Ingredients

CAS#	Chemical Name	Percentage by weight	ACGIH TWA	Osha Pel	Osha Stel
7647-01-0	Hydrochloric acid	4.0-4.5	5 ppm	5 ppm	N/E
7772-99-8	Stannous Chloride	9.5-10.0	N/E	N/E	N/E

## Section 3: Hazards Identification

<b>Eyes:</b>	Liquid may cause severe eye burns and permanent eye damage.
<b>Skin:</b>	Liquid can cause redness, pain, and severe burns.
<b>Inhalation:</b>	Vapors may cause coughing, choking and difficulty breathing and pulmonary edema.
<b>Ingestion:</b>	May cause severe burns of the mouth, throat, and stomach. Nausea, vomiting and diarrhea.
<b>Chronic:</b>	Persistent irritation and dermatitis may result from repeated skin over exposure.

## Section 4: First Aid Measure

<b>Eyes:</b>	Remove contact lenses. Flush with plenty of water. Get medical aid.
<b>Skin:</b>	Wash skin with plenty of soap and water. Get medical aid if symptoms persist.
<b>Inhalation:</b>	Immediately remove from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get Medical aid.
<b>Ingestion:</b>	Do not induce vomiting. If conscious, give 1-2 glasses of water. Get medical aid.

## Section 5: Fire Fighting Measures

<b>Autoignition Temperature:</b>	N/A	<b>Flash Point:</b>	N/A	<b>LEL / UEL:</b>	N/A
<b>Extinguishing Media:</b>	Water spray, foam, halon, carbon dioxide, dry chemical				
<b>General Information:</b>	If this product is involved in fire, fire run-off water should be contained to prevent possible environmental damage.				

## Section 6: Accidental Release Measures

<b>Spill Procedure:</b>	Provide adequate ventilation. Wear appropriate personal protection. Sprinkle absorbent compound onto spill then sweep into a plastic container. Wipe up further residue with paper towel and place in container. Wash spill area with soap and water.
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## Section 7: Handling and Storage



**Handling:** Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Use in a well ventilated area. Do not eat or drink while handling this product.

**Storage:** Keep away from sources of heat. Store in a cool, dry, well-ventilated area, away from incompatible substances. Keep from freezing.

## Section 8: Exposure Controls

**Routes of entry:** Eyes, ingestion, inhalation, and skin.  
**Ventilation:** Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.  
**Personal Protection:** Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact. Use a NIOSH approved respirator when necessary.

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>Odor:</b>	Pungent odor	<b>Solubility in water:</b>	100% soluble	<b>Evaporation Rate:</b>	Similar to water		
<b>Boiling Point:</b>	95°C	<b>Specific Gravity:</b>	1.12@25°C	<b>Vapor Pressure:</b>	18 mmHg@20°C	<b>Vapor Density:</b>	Equal to water	<b>pH:</b>	<2.0

## Section 10: Stability and Reactivity

**Stability:** Stable at normal conditions and temperatures.  
**Conditions to avoid:** Extreme heat and contact with incompatible chemicals.  
**Incompatibilities:** HCL is not compatible with bases, amines, alkali metals, copper, copper alloys and aluminum. Stannous chloride has a potentially explosive reaction with metal nitrates and is also incompatible with strong oxidizers and alkali metals. This product is not compatible with water reactive materials.  
**Polymerization:** Will not occur.  
**Decomposition:** Extreme heat may cause product to decompose, producing toxic fumes (i.e. chloride compounds, tin oxides)

## Section 11: Toxicological Information

<b>Sensitization:</b> (effects of repeated exposure)	None Known
<b>Carcinogenicity:</b> (risk of cancer)	None Known
<b>Teratogenicity:</b> (risk of malformation in an unborn fetus)	None Known
<b>Reproductive Toxicity:</b> (risk of sterility)	None Known
<b>Mutagenicity:</b> (risk of heritable genetic effects)	None Known

<b>Lethal Exposure Concentrations:</b>	<b>Ingestion (LD50):</b>	<b>Inhalation: (LC50)</b>	<b>Skin (LD50):</b>	<b>Inhalation (TCLo):</b>
Hydrochloric acid	900 mg/kg Rabbit	1108 ppm/1H Mouse	N/A	685 ug/m3/24H/84D Rabbit
Stannous Chloride	250 mg/kg Mouse	N/A	N/A	3 mg/m3/24H/5W Rat

## Section 12: Ecological Information

**General Information:** Avoid runoff into storms and sewers, which lead into waterways. Water runoff can cause environmental damage  
**Volatile Organic compounds, % by weight:** 0%  
**Volatile Organic compounds, grams per litre:** 0g/L

## Section 13: Disposal Information

**General Information:** Dispose of in accordance with all local, provincial, state, and federal regulations. Water

runoff can cause environmental damage.

## Section 14: Transportation Information

**Ground Canada:** (1 Liter and smaller)

Classified as **Limited Quantity**. **MSDS must accompany each carton.**  
**Refer to TDG regulations** (Canadian Transportation of Dangerous Goods regulations).  
**Recommend Shipper be trained and certified.**

**Ground USA:** (1 Liter and smaller)

Classified as **Limited Quantity**. Refer to USA CFR 49 Regulations. **MSDS must accompany each carton.**  
Meets **ORM-D** label requirements and dual marking is permissible.  
**Recommend Shipper be trained and certified.**

**Air:** (all sizes 1L or smaller)

**WE DO NOT RECOMMEND TRANSPORTION OF THIS PRODUCT BY AIR.** If you must move this product by air, DG repackaging and documentation should be contracted through a certified Dangerous Goods Agent.

**Shipper must be trained and certified. Refer to IATA Dangerous Goods Regulations.**

Shipping Name: **Corrosive liquid, acidic, inorganic n.o.s.(Hydrochloric Acid, Stannous Chloride)**,  
UN number: **3264**, Class: **8**, Packing Group: **II**.

**Sea:**

**Shipper must be trained and certified. Refer to IMDG regulations.**

Shipping Name: **Corrosive liquid, acidic, inorganic n.o.s.(Hydrochloric Acid, Stannous Chloride)**,  
UN number: **3264**, Class: **8**, Packing Group: **II**.

## Section 15: Regulatory Information

### **CANADA**

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.**

#### **DSL**

All ingredients in this product are listed on the Domestic Substances List

#### **WHMIS**

This product belongs to the following categories: **D1B, E**

#### **Industry and Science Canada**

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

#### **Health Canada**

Products produced by MG Chemicals intended for retail display conform to the Canadian Consumer Labeling Regulations.

## Section 15: Regulatory Information

### **USA**

**CAA** (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product does not contain any chemicals listed as hazardous air pollutants.

**SARA** (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

None of the chemicals in this product have a reportable quantity.

**EPCRA** (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain any chemicals subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

**TSCA** (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

**California Proposition 65** (Chemicals known to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

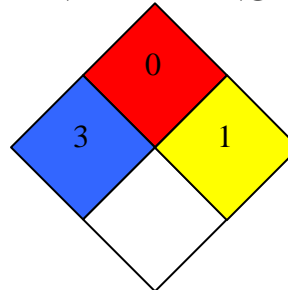
This product does not contain any chemicals listed.

### HMIS RATING

<b>HEALTH:</b>	3
<b>FLAMMABILITY:</b>	0
<b>PHYSICAL HAZARD:</b>	1
<b>PERSONAL PROTECTION (PPE):</b>	H

Protection=H (Splash goggles, gloves, protective apron and vapor respirator.)

### NFPA RATING



### EUROPE

#### RoHS

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, or PBDE's, and complies with European RoHS regulations.

#### WEEE

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

### Section 16: Other Information

**Definitions:** N/A = not applicable, N/E = not established

**Disclaimer:** This material safety data sheet is provided as an information resource only. M.G. Chemicals believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.