

Issue date 13-Jul-2018

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Revision Number 4

## 1. IDENTIFICATION

### Product identification

Product identifier Cronatron™ 92 Acid Core Solder  
 Other means of identification CW1021  
 Recommended use Solder Alloy  
 Restrictions on use For industrial use only

### Supplier

Corporate Headquarters:  
 Cronatron, A Lawson Brand  
 Lawson Products, Inc.  
 8770 W. Bryn Mawr Ave.- Suite 900  
 Chicago, IL 60631  
 1-866-529-7664

Canadian Distribution Center:  
 Lawson Canada  
 7315 Rapistan Court  
 Mississauga, ON L5N 5Z4  
 (800) 323-5922

**24 Hour Emergency Phone Number** (888) 426-4851 (Prosar)

**Website** <https://www.lawsonproducts.com>

## 2. HAZARD(S) IDENTIFICATION

**Hazard Classification** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), WHMIS 2015 and GHS Regulations.

Acute toxicity - Oral	Category 4
Respiratory sensitization	Category 1
Skin sensitization	Category 1

### Symbol



**Signal word** DANGER

**Hazard statements**  
 H317 - May cause an allergic skin reaction  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 H302 - Harmful if swallowed

**Precautionary statements**

<b>General</b>	P101 - If medical advice is needed, have product container or label at hand P102 - Keep out of reach of children P103 - Read label before use.
<b>Prevention</b>	P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P264 - Wash skin thoroughly after handling P272 - Contaminated work clothing should not be allowed out of the workplace P280 - Wear protective gloves/protective clothing and eye/face protection P285 - In case of inadequate ventilation wear respiratory protection
<b>Response</b>	
<b>Skin</b>	P302 + P352 - IF ON SKIN: Wash with plenty of soap and water P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention P363 - Wash contaminated clothing before reuse P321 - For Specific treatment see section 4 of this sds
<b>Inhalation</b>	P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
<b>Ingestion</b>	P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell P330 - Rinse mouth
<b>Storage</b>	Not applicable
<b>Disposal</b>	P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable
<b>Hazard(s) Not Otherwise Classified (HNOC)</b>	Not available.
<b>Physical Hazards Not Otherwise Classified (PHNOC)</b>	Not available.
<b>Unknown acute toxicity</b>	No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Composition** Mixture.

Chemical name	CAS-No	Weight %
Tin	7440-31-5	80-100
Silver	7440-22-4	2-4
Urea	57-13-6	0-4
Ethylene Diamine Dihydrochloride	333-18-6	0-4
Azelaic Acid	123-99-9	0-4
Succinimide	123-56-8	0-4
Ethylene Hydrochloride	557-66-4	0-4

### 4. FIRST-AID MEASURES

#### Necessary first-aid measures

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

<b>Ingestion</b>	Give large quantities of water and induce vomiting. Call a physician or Poison Control Center immediately.
<b>Skin contact</b>	Wash area thoroughly with soap and water. If skin irritation or rash occurs, get medical advice/attention.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.
<b>Most important symptoms (acute)</b>	No known significant effects or critical hazards.
<b>Most important symptoms (over-exposure)</b>	No known significant effects or critical hazards.
<b>Indication of any immediate medical attention and special treatment needed</b>	None known.

## 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water on molten metal. Large fires may be flooded with water from a safe distance.
<b>Specific hazards</b>	Finely divided dust may form explosive mixture with air. Do not plunge wet or damp solder bars/ pieces into molten solder. Never drop water or liquids into molten solder.
<b>Special protective equipment for fire-fighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	Use personal protection recommended in Section 8.
<b>Methods and materials for containment and cleaning up</b>	Solder is recyclable. Vacuuming is recommended for metal dust from sawing / grinding operations.

## 7. HANDLING AND STORAGE

<b>Precautions for safe handling</b>	Store in a cool, dry, and well-ventilated place.
<b>Conditions for safe storage, including any incompatibilities</b>	Store at ambient or lower temperatures. Wet or moist Ingots WILL present an explosion hazard when submerged in molten solder. Avoid fire/explosion risks. Always preheat ingot before charging into furnace.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Chemical name	OSHA PEL (TWA)	ACGIH OEL (TWA)	NIOSH - TWA
Tin	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA
Silver	0.01 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA	0.01 mg/m <sup>3</sup> TWA 0.9 µg/m <sup>3</sup> TWA

Chemical name	OSHA PEL (TWA)	ACGIH OEL (TWA)	NIOSH - TWA
Urea	-	-	-
Ethylene Diamine Dihydrochloride	-	-	-
Azelaic Acid	-	-	-
Succinimide	-	-	-
Ethylene Hydrochloride	-	-	-

### Appropriate engineering controls

Use process enclosures, local exhaust ventilation, or other controls to keep air containment concentration below current applicable OSHA permissible exposure limit or ACGIH TLV limit, and volatiles below lower explosive limit.

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

#### Eye protection

Wear approved safety glasses or welding goggles appropriate to the procedure.

#### Skin and body protection

Protective gloves are recommended, especially for high temperature applications to prevent burns. Suitable protective clothing.

#### Respiratory protection

Use a NIOSH/MSHA approved respirator in dusty environments.

#### Hygiene measures

General industrial hygiene practice.

### Canadian Province Occupational Exposure Limits

Chemical name	AB	BC	MB	NB	NL	NS	ON	PE	QC	SK
Tin	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA
Silver	0.1 mg/m <sup>3</sup> TWA	0.01 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA	0.1 mg/m <sup>3</sup> TWA
Urea	-	-	-	-	-	-	-	-	-	-
Ethylene Diamine Dihydrochloride	-	-	-	-	-	-	-	-	-	-
Azelaic Acid	-	-	-	-	-	-	-	-	-	-
Succinimide	-	-	-	-	-	-	-	-	-	-
Ethylene Hydrochloride	-	-	-	-	-	-	-	-	-	-

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	Solid
<b>Color</b>	Silver
<b>Odor</b>	None
<b>Odor threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting point/range °C</b>	221 °C
<b>Melting point/range °F</b>	430 °F
<b>Boiling point/range °C</b>	Sn 2270, Ag 2210 °C
<b>Boiling point/range °F</b>	Sn 4120, Ag 4010 °F
<b>Flash point °C</b>	Not Available

<b>Flash point °F</b>	Not Available
<b>Flash point method used</b>	Not applicable
<b>Evaporation rate</b>	Not available
<b>Flammability (Solid, Gas)</b>	Not available
<b>Lower explosion limit</b>	Not available
<b>Upper explosion limit</b>	Not available
<b>Vapor pressure</b>	Not available
<b>Vapor density</b>	Not available
<b>Relative density</b>	7.4186
<b>Solubility</b>	Insoluble in cold water Insoluble in hot water
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Autoignition temperature °C</b>	Not available
<b>Autoignition temperature °F</b>	Not available
<b>Decomposition temperature °C</b>	Not available
<b>Decomposition temperature °F</b>	Not available
<b>Viscosity</b>	Not available

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	No dangerous reactions under normal conditions of use.
<b>Chemical stability</b>	Stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	Avoid contact with incompatible materials.
<b>Incompatible materials</b>	Oxidizers. Chlorine trifluoride. Hydrogen peroxide. Sodium azide. ammonia. Acetylene gas.
<b>Hazardous decomposition products</b>	None under normal use.

## 11. TOXICOLOGICAL INFORMATION

<b>Information on likely routes of exposure</b>	Dermal. Inhalation. Ingestion.
<b>Symptoms</b>	Flu-like symptoms (nausea, constipation, headache, dizziness).
<b>Delayed and immediate effects as well as chronic effects from short and long-term exposure</b>	Prolonged or excessive exposures may result in argyria, a permanent localized blue-gray discoloration of the eye, skin, or mucous membranes.

## Numerical measures of toxicity

Chemical name	Inhalation LC50:	Dermal LD50:	Oral LD50:
Tin	-	= 700 mg/kg Rat	700 mg/kg Rat
Silver	-	> 5000 mg/kg Rat >2000 mg/kg Rat	>5000 mg/kg Rat > 2000 mg/kg Rat
Urea	-	= 8471 mg/kg Rat	8471 mg/kg Rat
Ethylene Diamine Dihydrochloride	-	= 1620 mg/kg Mouse	> 6400 mg/kg Rabbit
Azelaic Acid	-	> 5 g/kg Rat > 5000 mg/kg Rat	>5000 mg/kg Rat
Succinimide	-	= 14 g/kg Rat	-
Ethylene Hydrochloride	-	-	-

ATEmix (dermal) Not available

ATEmix (oral) Not available

ATEmix (inhalation-gas) Not available

ATEmix (inhalation-vapor) Not available

ATEmix (inhalation-dust/mist) Not available

## Carcinogenicity

Chemical name	ACGIH OEL - Carcinogens	IARC	OSHA Carcinogens	NTP
Tin	-	-	-	-
Silver	-	-	-	-
Urea	-	-	-	-
Ethylene Diamine Dihydrochloride	-	-	-	-
Azelaic Acid	-	-	-	-
Succinimide	-	-	-	-
Ethylene Hydrochloride	-	-	-	-

## Canadian Province carcinogenicity limits

Chemical name	Alberta - Carcinogen	British Columbia - Carcinogen	Manitoba - Carcinogen	New Brunswick - Carcinogen	Nova Scotia - Carcinogen	Quebec - Carcinogen
Tin	-	-	-	-	-	-
Silver	-	-	-	-	-	-
Urea	-	-	-	-	-	-
Ethylene Diamine Dihydrochloride	-	-	-	-	-	-
Azelaic Acid	-	-	-	-	-	-
Succinimide	-	-	-	-	-	-
Ethylene Hydrochloride	-	-	-	-	-	-

## 12. ECOLOGICAL INFORMATION

## Ecotoxicity

Chemical name	Algae/aquatic plants	Fish LC50
Tin	-	-
Silver	-	0.00155 - 0.00293 mg/L Pimephales promelas 96h =0.064 mg/L Lepomis macrochirus 96h =0.0062 mg/L Oncorhynchus mykiss 96h
Urea	-	16200 - 18300mg/L Poecilia reticulata 96h
Ethylene Diamine Dihydrochloride	-	-
Azelaic Acid	-	-
Succinimide	-	-
Ethylene Hydrochloride	-	-

**Persistence and degradability** Not available.

### Bioaccumulation

Chemical name	CAS-No	Partition coefficient (log Kow)	Bioconcentration factor (BCF)
Tin 7440-31-5	7440-31-5	-	-
Silver 7440-22-4	7440-22-4	-	-
Urea 57-13-6	57-13-6	-1.59 at 25 °C	<10
Ethylene Diamine Dihydrochloride 333-18-6	333-18-6	-	-
Azelaic Acid 123-99-9	123-99-9	-	-
Succinimide 123-56-8	123-56-8	-	-
Ethylene Hydrochloride 557-66-4	557-66-4	-	-

**Mobility in soil** Not available.

**Other adverse effects** Do not allow product to reach sewage system, soil, surface or ground water, or any water course. Notify proper authorities if entry occurs

## 13. DISPOSAL CONSIDERATIONS

**Disposal information** Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Collect, transport, store or dispose in accordance with local, state, provincial and federal regulations.

**Contaminated packaging** Dispose in accordance with local, state and federal regulations.

## 14. TRANSPORTATION INFORMATION

### Shipping Descriptions

**DOT**  
Proper shipping name Not regulated

**TDG**  
Proper shipping name Not regulated

**IATA**  
Proper shipping name Not regulated

**IMDG/IMO**

Proper shipping name Not regulated

**Marine Pollutants**

Chemical name	CAS-No	USDOT Marine Pollutant	Canada TDG Marine Pollutant	IMDG Marine Pollutant
Tin	7440-31-5	-	-	-
Silver	7440-22-4	-	-	-
Urea	57-13-6	-	-	-
Ethylene Diamine Dihydrochloride	333-18-6	-	-	-
Azelaic Acid	123-99-9	-	-	-
Succinimide	123-56-8	-	-	-
Ethylene Hydrochloride	557-66-4	-	-	-

**Special Precautions**

Multi-modal shipping descriptions are provided for informational purposes and do not consider container size. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**15. REGULATORY INFORMATION****State regulations****U.S. state Right-to-Know regulations**

Chemical name	CAS-No	Massachusetts - RTK	New Jersey - RTK	Pennsylvania - RTK
Tin	7440-31-5	X	X	X
Silver	7440-22-4	X	X	X
Urea	57-13-6	-	-	-
Ethylene Diamine Dihydrochloride	333-18-6	-	-	-
Azelaic Acid	123-99-9	-	-	-
Succinimide	123-56-8	-	-	-
Ethylene Hydrochloride	557-66-4	-	-	-

**California Prop. 65**

Chemical name	CAS-No	California Prop. 65
Tin	7440-31-5	-
Silver	7440-22-4	-
Urea	57-13-6	-
Ethylene Diamine Dihydrochloride	333-18-6	-
Azelaic Acid	123-99-9	-
Succinimide	123-56-8	-
Ethylene Hydrochloride	557-66-4	-

**U.S. Federal Regulations****US EPA SARA 313**



Chemical name	CAS-No	CERCLA/SARA Hazardous Substances RQ	SARA 313 - Threshold Values
Tin	7440-31-5	-	-
Silver	7440-22-4	1000 lb 454 kg 0.454 kg	1.0 %
Urea	57-13-6	-	-
Ethylene Diamine Dihydrochloride	333-18-6	-	-
Azelaic Acid	123-99-9	-	-
Succinimide	123-56-8	-	-
Ethylene Hydrochloride	557-66-4	-	-

**US EPA SARA 311/312  
hazardous categorization** Not applicable

#### TSCA and Canadian Inventories

Chemical name	Inventory - United States - Section 8(b) Inventory (TSCA)	U.S. - TSCA (Toxic Substances Control Act) - Section 12(b) - Export Notification	DSL	NDSL
Tin	X	-	X	-
Silver	X	-	X	-
Urea	X	-	X	-
Ethylene Diamine Dihydrochloride	X	-	X	-
Azelaic Acid	X	-	X	-
Succinimide	X	-	X	-
Ethylene Hydrochloride	X	-	X	-

Legend X - Listed

## 16. OTHER INFORMATION

#### NFPA

Health 1  
Flammability 0  
Instability 0

#### HMIS

Health 1  
Flammability 0  
Physical hazards 0

Notice: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA).

**Prepared by** Regulatory Affairs

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**Revision note**

**Key to abbreviations**

ACGIH (American Conference of Governmental Industrial Hygienists)  
ATE (Average Toxicity Estimate)  
DSL/NDSL (Domestic Substance List/Non-Domestic Substance List)  
HMIS (Hazardous Materials Identification System)  
IARC (International Agency for Research on Cancer)  
IATA (International Air Transport Association)  
IMDG/IMO (International Maritime Dangerous Goods/International Maritime Organization)  
NFPA (National Fire Protection Association)  
NTP (National Toxicology Program)  
OEL (Occupational Exposure Level)  
OSHA (Occupational Safety and Health Administration of the US Department of Labor)  
PEL (Permissible Exposure Limit)  
TSCA (Toxic Substance Control Act)  
USEPA (United States Environmental Protection Agency)

**Disclaimer**

**The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.**

**End of Safety Data Sheet**