Safety Data Sheet

Issue date 04-Jun-2018 **Revision date** 14-Dec-2022 **Revision Number** 2

1. IDENTIFICATION

Product identification

Product identifier	Cronatron™ 52 Aluminum/Zinc Bare Brazing Rod
Other means of identification	CW1735
Recommended use	Electrode
Restrictions on use	Not available

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 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.

Symbol Not applicable

Signal word Not applicable

Hazard statements Not available

Precautionary statements

General
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.

Prevention
P285 - In case of inadequate ventilation wear respiratory protection
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves/protective clothing and eye/face protection
P260 - Do not breathe dust/fume/gas/mist/vapors/spray

Response

General P314 - Get medical advice/attention if you feel unwell.

Storage Not available

Disposal P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Hazard(s) Not Otherwise Classified (HNOC) None known.

Physical Hazards Not Otherwise Classified (PHNOC) When this product is used in a welding process the most important hazards are: heat, radiation, electric shock and welding fumes.

Unknown acute toxicity None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition Mixture.

Chemical name	CAS-No	Weight %
Zinc	7440-66-6	85-95
Copper	7440-50-8	1-11
Aluminum	7429-90-5	1-11

4. FIRST-AID MEASURES

Necessary first-aid measures

General Information Call for medical aid. Employ First Aid techniques recommended by the Red Cross.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. Administer artificial respiration if not breathing. If breathing has stopped, contact emergency medical services immediately.

Ingestion Seek medical attention.

Skin contact Wash affected area with soap and water to remove dust or particles. If skin irritation or rash occurs, get medical advice/attention.

Eye contact Flush with a large amount of fresh water for at least 15 minutes to remove dusts or fumes. Get medical attention.

Most important symptoms (acute) Not available.

Most important symptoms (over-exposure) Not available.

Indication of any immediate medical attention and special treatment needed Call a physician or Poison Control Centre immediately.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Dry chemical. Carbon dioxide (CO2).

Unsuitable extinguishing media Water.

Specific hazards These products as shipped are non-hazardous, non-flammable, non-explosive, and non-reactive. Toxic oxides are emitted when heated above the melting point.

Special protective equipment for fire-fighters Low pressure extinguisher. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Reasonably expected fume constituents of the fume could include complex oxides of manganese.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Shovel into suitable container for disposal. Wear gloves when prolonged contact with skin is likely.

Methods and materials for containment and cleaning up Do not flush residue into waterways.

7. HANDLING AND STORAGE

Precautions for safe handling Avoid exposure to dust and do not ingest. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities Keep material sealed and dry before use. After using, keep remaining product sealed and dry and do not remove product identification label or warning label. Do not remove product identification label or warning label. Keep away from food, beverages, and feed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	OSHA PEL (TWA)	California - PELs	ACGIH OEL (TWA)	NIOSH - TWA
Zinc	-			
Copper	0.1 mg/m³ TWA 1 mg/m³ TWA	0.1 mg/m³ PEL (fume); 1 mg/m³ PEL (dust and mist)	0.2 mg/m³ TWA	1 mg/m³ TWA 0.1 mg/m³ TWA
Aluminum	15 mg/m³ TWA 5 mg/m³ TWA	10 mg/m³ PEL (total dust); 5 mg/m³ PEL (respirable fraction) 5 mg/m³ PEL	1 mg/m³ TWA	10 mg/m³ TWA 5 mg/m³ TWA 5 mg/m³ TWA 5 mg/m³ TWA

Appropriate engineering controls Adequate ventilation should be provided to keep exposure levels below current acceptable exposure limits. Read and understand the manufacturer's instructions and precautionary label on this product. Monitor fume levels and do not exceed permissible exposure limits or values. When the material is consumed, fume and gas decomposition products generated are different in percent and form from the ingredients listed in section 3. Fume and decomposition products, not the ingredients in the electrode, are important. Decomposition products include those originating from the volatilization, reaction or oxidation of the wire or rod plus those from the base metal and coating. These components are virtually always present as complex oxides and not as metals.

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 Wear head, hand, and body protection which helps to prevent injury from sparks and flames. See ANSI Z49.1. At a minimum, this includes gloves and protective safety goggles or glasses.

Respiratory protection Use NIOSH approved breathing apparatus or air supplied respirator when soldering in a confined space or where local exhaust or ventilation does not keep exposure below the TLV's. Monitor fume levels and do not exceed permissible exposure limits or values. One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample inside the welder's helmet, if worn, or in the worker's breathing zone. See ANSI/AWS F1.1.

Hygiene measures Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

Canadian Province Occupational Exposure Limits

Chemical name	AB	BC	MB	NB	NL	NS	ON	PE	QC	SK
Zinc	-	-	-	-	-	-	-	-	-	-
Copper	0.2 mg/m³ TWA 1 mg/m³ TWA	1 mg/m³ TWA 0.2 mg/m³ TWA	0.2 mg/m³ TWA	0.2 mg/m³ TWA 1 mg/m³ TWA	0.2 mg/m³ TWA	0.2 mg/m³ TWA	0.2 mg/m³ TWA 1 mg/m³ TWA	0.2 mg/m³ TWA	0.2 mg/m³ TWAEV 1 mg/m³ TWAEV	0.2 mg/m³ TWA 1 mg/m³ TWA
Aluminum	10 mg/m³ TWA 5 mg/m³ TWA	1.0 mg/m³ TWA	1 mg/m³ TWA	10 mg/m³ TWA 5 mg/m³ TWA	1 mg/m³ TWA	1 mg/m³ TWA	1 mg/m³ TWA	1 mg/m³ TWA	10 mg/m³ TWAEV 5 mg/m³ TWAEV 5 mg/m³ TWAEV	10 mg/m³ TWA 5 mg/m³ TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state Solid

Odor None

Odor threshold Not available

pH Not applicable

Melting point/range °C Not available

Melting point/range °F Not available

Boiling point/range °C Not available

Boiling point/range °F Not available

Flash point °C / °F Not available

Evaporation rate Not available

Flammability (Solid, Gas) Not available

Lower explosion limit Not available

Upper explosion limit Not available

Vapor pressure Not applicable

Vapor density Not available

Relative density	Not available
Solubility	Not available
Partition coefficient (n-octanol/water)	Not available
Autoignition temperature °C	Not available
Autoignition temperature °F	Not available
Decomposition temperature °C	Not available
Decomposition temperature °F	Not available
Viscosity	Not available

10. STABILITY AND REACTIVITY

Reactivity	Stable.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Avoid extreme heat. Avoid moisture.
Incompatible materials	Strong acids. Strong oxidizing agents. Prevent contact with halogens.
Hazardous decomposition products	metal oxide/oxides. Fumes can be dangerous to your health.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	Dermal. Inhalation. Eyes.
Symptoms	Soldering fumes cannot be classified simply. the composition and quantity of both are dependent upon the metal being soldered, the process, procedure and the rod used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include:. Coatings on the metal being soldered (such as paint, plating, or galvanizing), the volume of the work area, the quality and the amount of ventilation, position of the worker's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities). Pre-existing respiratory or allergic conditions may be aggravated in some individuals (i.e. asthma, emphysema). Inhalation of fumes can cause metal fume fever. Symptoms may be delayed. May cause irritation of respiratory tract. Repeated or prolonged exposure may cause irritation to eyes and skin. Fumes may result in discomfort such as sneezing, and coughing and should be considered as an irritant to the respiratory system. Existing lung disorders may be aggravated. If swallowed, nausea, vomiting, and diarrhea may result. Skin contact may result in mild dermatitis or irritation, with existing skin disorders possibly being aggravated. Upon eye contact, mild irritation to eye surfaces may result, and existing eye disorders possibly being aggravated. Individuals with Wilson's Disease are more susceptible to copper poisoning. Acute (short term) exposure may cause respiratory tract irritation, fever, muscle ache, chills, weakness, cough, and a metallic taste. Inhalation may cause respiratory tract and mucous membrane irritation. Symptoms include nasal discharge and nose bleeds, coughing, sore throat and labored breathing. Severe exposure may cause bronchospasm and pulmonary edema. Absorption may cause systemic poisoning similar to that which occurs with ingestion. Inhalation of fumes may cause a flu-like illness called 'metal fume fever'. Typically metal

fume fever begins four to twelve hours after sufficient exposure to freshly formed fumes. First symptoms are a metallic taste, dryness, and irritation of the throat. Cough or shortness of breath may occur along with a headache, fatigue, nausea, vomiting, dryness, and irritation of the throat. Copper poisoning can result in hemolytic anemia and kidney, liver, and spleen damage. Ingestion not an expected route of entry, but if ingested product could cause serious injury. Arc Rays can injure eyes. Spatter and molten metal can cause burn injuries. Electric shock can kill. Skin cancer has been reported from arc radiation. May cause an allergic skin reaction. Warn wearers of heart pacemakers or other medical electronic equipment vital to life that welding operations may impede the function of the medical device.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Prolonged or excessive exposures may result in argyria, a permanent localized blue-gray discoloration of the eye, skin, or mucous membranes. Primary route of entry is the respiratory system. Excessive zinc intake has been associated with copper deficiency anemia. Copper may damage the liver, kidney, spleen, pancreas, and brain. Copper poisoning can result in hemolytic anemia and kidney, liver, and spleen damage. Ingestion of large amounts may be fatal.

Numerical measures of toxicity

Chemical name	Inhalation LC50:	Dermal LD50:	Oral LD50:
Zinc	-	= 630 mg/kg Rat	630 mg/kg Rat
Copper	>5.11 mg/L Rat	-	-
Aluminum	>0.888 mg/L Rat	-	-

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
Zinc	-	-	-	-
Copper	-	-	-	-
Aluminum	A4	-	-	-

Canadian Province carcinogenicity limits

Chemical name	Alberta - Carcinogen	British Columbia - Carcinogen	Manitoba - Carcinogen	New Brunswick - Carcinogen	Nova Scotia - Carcinogen	Quebec - Carcinogen
Zinc	-	-	-	-	-	-
Copper	-	-	-	-	-	-
Aluminum	-	-	ACGIH A4	-	ACGIH A4	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish LC50
Zinc	0.09 - 0.125mg/L Pseudokirchneriella subcapitata 72h 0.11 - 0.271mg/L Pseudokirchneriella subcapitata 96h	2.16 - 3.05 mg/L Pimephales promelas 96h =0.41 mg/L Oncorhynchus mykiss 96h =3.5 mg/L Lepomis macrochirus 96h =0.45 mg/L Cyprinus carpio 96h
Copper	0.0426 - 0.0535mg/L Pseudokirchneriella subcapitata 72h 0.031 - 0.054mg/L Pseudokirchneriella subcapitata 96h	0.0068 - 0.0156mg/L Pimephales promelas 96h < 0.3mg/L Pimephales promelas 96h = 0.052mg/L Oncorhynchus mykiss 96h = 0.112mg/L Poecilia reticulata 96h = 0.2mg/L Pimephales promelas 96h = 0.3mg/L Cyprinus carpio 96h = 0.8mg/L Cyprinus carpio 96h = 1.25mg/L Lepomis macrochirus 96h
Aluminum	-	-

Persistence and degradability Not available.

Bioaccumulation

Chemical name	CAS-No	Partition coefficient (log Kow)	Bioconcentration factor (BCF)
Zinc 7440-66-6	7440-66-6	-	-
Copper 7440-50-8	7440-50-8	-	29
Aluminum 7429-90-5	7429-90-5	-	-

Mobility in soil Not available.

Other adverse effects Welding consumables and materials can degrade into the components used to manufacture the product. Avoid exposure to conditions that could lead to accumulation in soils and groundwater.

13. DISPOSAL CONSIDERATIONS

Disposal information Dispose of any grinding dust and waste resides in accordance with EPA or local regulations. Do not flush residue into waterways. Plastic materials, cardboard, and wire can be recycled. Solder can be recycled.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

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
Zinc	7440-66-6	-	-	-
Copper	7440-50-8	X	X	X
Aluminum	7429-90-5	-	-	-

15. REGULATORY INFORMATION

State regulations

U.S. state Right-to-Know regulations

Chemical name	CAS-No	Massachusetts - RTK	New Jersey - RTK	Pennsylvania - RTK
Zinc	7440-66-6	X	X	X
Copper	7440-50-8	X	X	X
Aluminum	7429-90-5	X	X	X

California Prop. 65

Chemical name	CAS-No	California Prop. 65
Zinc	7440-66-6	-
Copper	7440-50-8	-
Aluminum	7429-90-5	-

California Proposition 65 Warning: This product contains or produces a chemical known to the State of California to cause birth defects (or other reproductive harm) and cancer

U.S. Federal Regulations

US EPA SARA 313

Chemical name	CAS-No	CERCLA/SARA Hazardous Substances RQ	SARA 313 - Threshold Values
Zinc	7440-66-6	454 kg 1000 lb	1.0 %
Copper	7440-50-8	5000 lb 2270 kg	1.0 %
Aluminum	7429-90-5	-	1.0 %

US EPA SARA 311/312 hazardous categorization Not available

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
Zinc	X	X	X	-
Copper	X	-	X	-
Aluminum	X	-	X	-

Legend X - Listed

16. OTHER INFORMATION

NFPA

Health	2
Flammability	0
Instability	0

HMIS

Health	2
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 Orgnaization)
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