Material Safety Data Sheet

Revision Date *15-Mar-2016*

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code CW1904
Product name CRONACUT EAGLE 1100
Recommended Use Welding Alloy

Supplier Cronatron, A Lawson Brand
Lawson Products, Inc.
8770 W.Bryn Mawr Ave.- Suite 900
Chicago, IL 60631
1-866-529-7664
Emergency telephone number (888) 426-4851

2. HAZARDS IDENTIFICATION

Emergency Overview

Hazardous fumes are generated by welding, soldering or brazing. Exposure to welding related processes, materials, fumes or gases might be linked to certain neurological and physical disorders and cancer. Protect yourself and others at all times. A NIOSH approved, proper fitting and well-maintained respirator should be worn at all times while using this product. Keep your head out of the fumes and gases. Use adequate ventilation and/or exhaust to keep fumes and gases from your breathing zone and the general area. Keep others without proper respiratory protection away from the fumes and gases and your work zone while using this product.

Aggravated Medical Conditions
Asthma like conditions.

Principal Routes of Exposure
Inhalation of welding fumes. Eyes. Skin contact.

General Welding Statement
Arc Rays can injure eyes and burn skin. Electric shock can kill. Fumes and gases can be dangerous to your health. Heat rays (Infrared Radiation) from flame or hot metal can injure eyes. The ACGIH and OSHA have set the exposure level for welding fumes at 5 mg/m^3. Welding fumes must be considered as possible carcinogens under OSHA 29 CFR 1910.1200.

Potential health effects

Eyes Irritation. Itching. Redness. Tearing.

Skin Skin Irritation. Skin burns.

Inhalation Short term overexposure to welding fumes may result in dizziness, nausea, or dryness or irritation of nose, throat, or eyes. Long term exposure may lead to iron deposits in the lungs and is believed by some investigators to affect pulmonary function. Prolonged overexposure to Aluminum oxide may cause pulmonary fibrosis and emphysema. Chronic exposure to high levels of manganese dust and fumes can cause nervous system disorders, pneumonitis (inflammation of lung tissue), and may cause fibrosis (scarring of lung tissue) and reproductive disorders in males. Repeated or prolonged exposure to respirable crystalline silica may cause chronic lung injury (silicosis).

Ingestion May be harmful if swallowed. Swallowing chromium (VI) salts can cause severe injury or death.

3. COMPOSITION / INFORMATION ON INGREDIENTS

The fumes and gases produced when welding with normal use of these products are covered in section 10.

Chemical Name	CAS-No	Weight %
Iron	7439-89-6	60-70
Cellulose	9004-34-6	10-20
Titanium Dioxide	13463-67-7	1-11
Sodium Silicate	1344-09-8	1-11
Potassium Silicate	1312-76-1	1-11
Manganese	7439-96-5	1-11
Black Iron Oxide	1317-61-9	1-11

4. FIRST AID MEASURES

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact Wash off immediately with soap and plenty of water.

Ingestion Call a physician or Poison Control Center immediately.

Inhalation Move to fresh air. Seek medical attention if irritation persists. Oxygen or artificial respiration if needed.

5. FIRE FIGHTING MEASURES

Flash point °C None
Flash point °F None
Method No information available

Autoignition temperature °C No data available
Autoignition temperature °F No data available

Flammability Limits (% in Air)
Upper No data available
Lower No data available

Suitable extinguishing media
Product is nonflammable. Use extinguishing media appropriate to surrounding fire.

Special protective equipment for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Fire and Explosion Hazards
Welding arcs and sparks can ignite combustibles.

Sensitivity to shock
No information available.

Sensitivity to static discharge
No information available.

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up
Collect and contain for disposal.

7. HANDLING AND STORAGE

Handling
Refer to American National Standard Z49.1 for fire prevention during welding.

Storage
Keep in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Iron	-	-	5.0 mg/m³ as iron oxide respirable fraction	-
Cellulose	15 mg/m³ 5 mg/m³	-	10 mg/m³	-
Manganese	-	5 mg/m³	0.02 mg/m³ 0.1 mg/m³	-
Potassium Silicate	-	-	-	-
Black Iron Oxide	-	-	-	-
Sodium Silicate	-	-	-	-
Titanium Dioxide	15 mg/m³	-	10 mg/m³	-

Ventilation and Environmental Controls
Use enough ventilation, local exhaust at the work area, general, or both, to keep below the TLV's in the worker's breathing zone and the general area.

Hygiene measures
Wash hands after handling the product.

Respiratory protection
Use respirable fume respirator (P100) or supplied air when welding in confined spaces, or where local exhaust does not keep the exposure below TLV.

Hand Protection
Leather gloves.

Eye protection
Wear helmet or face shield with filter lens. As a rule of thumb, start with a shade which is too dark to see the work area. Then go to the next lighter shade which gives sufficient view of the work area. Provide protective screens and flash goggles,if necessary, to shield others.

Skin and body protection
Sufficient to provide protection from radiation,heat, sparks and electrical shock.May include arm and shoulder protectors,aprons and dark substantial clothing. See ANSI Z49.1.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Solid
Color	No information available
Odor	None
Odor Threshold	No information available
pH	No data available
Specific Gravity	No data available
Vapor pressure	No data available
Vapor density	No data available
Evaporation Rate	No data available
Water solubility	No data available
Partition Coefficient (n-octanol/water)	No data available
Boiling point/range °C	No data available
Boiling point/range °F	No data available
Melting point/range °C	No data available
Melting point/range °F	No data available
Flash point °C	None
Flash point °F	None

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
None known.

Incompatability
None known.

Hazardous Decomposition Products
Welding fumes cannot be classified simply. Their composition and quantity are dependent upon the metal being welded, the process, procedures and electrodes being used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include;. Contaminants in the atmosphere such as chlorinated hydrocarbon vapors from cleaning and degreasing operations. Coatings on the metal being welded (such as paint, plating, or galvanizing), number of welders and volume of work area. The amount and type of ventilation, the position of the welder's head with respect to the fume plume. When the electrode is consumed, the fume and gas decomposition products are different in percent and form from the ingredients listed in Section 3. New compounds not in the electrodes may form during use. The concentration of a given fume or gas component may decrease or increase by many times the original concentration in the electrode. Decomposition products include those originating from the volatilization, reaction or oxidation of the wire or rod plus those from the base metal and coating. Reasonably expected decomposition products from normal use of these products include the oxides of the material listed in the ingredients section, as well as carbon monoxide, carbon dioxide, ozone and nitrogen oxides. 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.

Polymerization
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Component Information

Chemical Name	LD50 (oral,rat)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat)
Iron 7439-89-6	984 mg/kg	-	-
Cellulose 9004-34-6	5 g/kg	2 g/kg	5800 mg/m³
Manganese 7439-96-5	9 g/kg	-	-
Potassium Silicate 1312-76-1	1300 mg/kg	-	-
Black Iron Oxide 1317-61-9	10000 mg/kg	-	-
Sodium Silicate 1344-09-8	1960 mg/kg	4640 mg/kg	-
Titanium Dioxide 13463-67-7	10000 mg/kg	-	-

Synergistic Products None known.

Specific Hazards The ACGIH recommended general limit for welding fume NOC (Not Otherwise Classified) is 5 mg/M3. Long term exposure can lead to Manganism.The central nervous system is affected and symptoms include muscular weakness and tremor. Exposed workers should get quarterly medical examinations for manganism. Silicon dioxide dust has been shown to cause adverse pulmonary effects on inhalation. In light of the low concentration of this component in the product, it is our best technical judgement that normal use of this product poses no such hazard.

Potential health effects

Sensitization	None known.
Chronic toxicity	See Section 2.
Mutagenic effects	None known.
Teratogenic effects	None known.
Reproductive toxicity	None known.
Target Organ Effects	See Section 2.

Carcinogenic effects Welding fumes must be considered as possible carcinogens under OSHA 29 CFR 1910.1200. See table below.

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
Iron	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Cellulose	Not Listed	Group 1	NTP-K	Not Listed	Listed
Titanium Dioxide	A4 - Not Classifiable as a Human Carcinogen	Group 2B	Not Listed	Not Listed	Listed
Sodium Silicate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Potassium Silicate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Manganese	A4 - Not Classifiable as a Human Carcinogen	Not Listed	Not Listed	Not Listed	Not Listed
Black Iron Oxide	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Sodium Silicate
Water Flea Data
216: 96 h Daphnia magna mg/L EC50
Potassium Silicate
Water Flea Data
216: 96 h Daphnia magna mg/L EC50

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products
Dispose of all product, residues and clean-up materials in accordance with local, state, and federal regulations.

14. TRANSPORTATION INFORMATION

DOT

Not Regulated

TDG

Not Regulated

15. REGULATORY INFORMATION

US EPA SARA 313

Chemical Name	US EPA SARA 313 Emission Reporting
Manganese	Listed

State Regulations

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
Iron	Not Listed	Not Listed	Not Listed
Cellulose	Not Listed	Listed	Carcinogen
Titanium Dioxide	Not Listed	Listed	Carcinogen
Sodium Silicate	Not Listed	Not Listed	Not Listed
Potassium Silicate	Not Listed	Not Listed	Not Listed
Manganese	Not Listed	Listed	Not Listed
Black Iron Oxide	Not Listed	Not Listed	Not Listed

International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA	Iron
X	X	-	X	Cellulose	X
X	-	X	Titanium Dioxide	X	X
-	X	Sodium Silicate	X	X	-
X	Potassium Silicate	X	X	-	X
Manganese	X	X	-	X	Black Iron Oxide
X	X	-	X		

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

16. OTHER INFORMATION

Prepared By V. Shargorodsky, Regulatory Affairs Engineer

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.