

Material Safety Data Sheet

(10981)

APPROVED MATERIAL

OCT 09 2013
MSDS # 10981
APPROVED BY [Signature]

Revision Date 25-Sep-2012

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code CW1880
Product name CRONAWEAR 7770
Recommended Use Welding Rod

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
None Known

Principal Routes of Exposure
Eyes. Skin. Inhalation.

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. Noise can damage hearing. Some gaseous products from the welding process such as chromium and/or nickel can reach their PEL before the General Exposure Limit of 5 mg/ cu.m for welding fumes is reached. . The ACGIH and OSHA have set the exposure level for welding fumes at 5 mg/m³. Welding fumes must be considered as possible carcinogens under OSHA 29 CFR 1910.1200.

Potential health effects

Eyes Irritation. Causes burns.

Skin Ultraviolet radiation from welding can cause flash 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 may cause. Reduced lung function. Bone erosion. Central nervous system effects.

Ingestion No adverse affects expected

3. COMPOSITION / INFORMATION ON INGREDIENTS

This section covers the materials from which these products are manufactured. The fumes and gases produced when welding with normal use of these products are covered in section 10.

Chemical Name	CAS-No	Weight %
Chromium	7440-47-3	10-30
Nickel	7440-02-0	10-30
Potassium Silicate	1312-76-1	10-30
Calcium Carbonate	1317-65-3	10-30
Sodium Silicate	1344-09-8	10-30
Feldspar	68476-25-5	7-13
Calcium Fluoride	7789-75-5	7-13
Strontium Carbonate	1633-05-2	5-10
Manganese	7439-96-5	1-5
Doloma	16389-88-1	1-5
Aluminum Oxide	1344-28-1	1-5
Silicon Dioxide (Crystalline Quartz)	14808-60-7	1-5
Sodium aluminum fluoride	15096-52-3	1-5
Cellulose	9004-34-6	1-5
Black Iron Oxide - Magnetite	1309-38-2	1-5
Silicate, Mica	12001-26-2	1-5
Bentonite Clay	1302-78-9	1-5
Titanium dioxide	13463-67-7	1-5
Molybdenum	7439-98-7	1-5
Niobium	7440-03-1	0.1-1
Silicon	7440-21-3	0.1-1
Copper	7440-50-8	0.1-1

4. FIRST AID MEASURES

Eye contact Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

Skin contact Wash area thoroughly with soap and water. Seek medical attention if irritation persists.

Ingestion No specific treatment is necessary since this material is not likely to be hazardous by ingestion.

Inhalation If fumes from reactions are inhaled, move to fresh air immediately. Get medical attention if cough or respiratory symptoms develop. If breathing is difficult, give oxygen. Seek medical attention.

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

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

Handle in accordance with good industrial hygiene and safety practice. Refer to American National Standard Z49.1 for fire prevention during welding.

Storage

Keep in a dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Manganese	-	5 mg/m ³	0.2 mg/m ³	-
Silicon	15 mg/m ³	-	-	-
Chromium	1 mg/m ³	-	0.5 mg/m ³	-

Nickel	1 mg/m ³	-	0.2 mg/m ³ inhalable fraction	-
Molybdenum	-	-	10 mg/m ³ 3 mg/m ³	-
Copper	0.1 mg/m ³	-	0.2 mg/m ³ 1 mg/m ³	-
Niobium	-	-	-	-
Titanium dioxide	15 mg/m ³	-	10 mg/m ³	-
Dolomite	-	-	-	-
Sodium aluminum fluoride	-	-	-	-
Silicon Dioxide (Crystalline Quartz)	-	-	0.025 mg/m ³	-
Cellulose	15 mg/m ³	-	10 mg/m ³	-
Sodium Silicate	-	-	-	-
Potassium Silicate	-	-	-	-
Calcium Carbonate	15 mg/m ³	-	-	-
Feldspar	-	-	-	-
Calcium Fluoride	-	-	-	-
Black Iron Oxide - Magnetite	-	-	-	-
Aluminum Oxide	15 mg/m ³	-	-	-
Bentonite Clay	-	-	-	-
Strontium Carbonate	-	-	-	-
Silicate, Mica	-	-	3 mg/m ³	-

Ventilation and Environmental Controls

Sufficient ventilation in volume and in pattern, should be provided to keep air contamination below current applicable OSHA PEL or ACGIH OEL limits.

Hygiene measures

Wash hands after handling the product.

Respiratory protection

Use air supplied respirator in confined spaces. Train welder to keep head out of fumes.

Hand Protection

Leather gloves.

Eye protection

Wear helmet or face shield with filter lens. As a rule of thumb, start with 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	No information available
Odor Threshold	No information available
pH	Not Applicable
Specific Gravity	No data available
Vapor pressure	Not Applicable
Vapor density	Not Applicable
Evaporation Rate	Not Applicable
Water solubility	No data available
VOC Content	No data available
Partition Coefficient (n-octanol/water)	Not Applicable
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.

Incompatibility

No information available

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. 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

No information available.

11. TOXICOLOGICAL INFORMATION**Component Information**

Chemical Name	LD50 (oral, rat)	LD50 (dermal ,rat/rab bit)	LC50 (inhalation, rat)
Manganese 7439-96-5	9 g/kg	-	-
Silicon 7440-21-3	3160 mg/kg	-	-
Chromium 7440-47-3	-	-	-
Nickel 7440-02-0	9000 mg/kg	-	-
Molybdenum 7439-98-7	-	-	-
Copper 7440-50-8	-	-	-
Niobium 7440-03-1	-	-	-
Titanium dioxide 13463-67-7	10000 mg/kg	-	-
Dolomite 16389-88-1	-	-	-
Sodium aluminum fluoride 15096-52-3	5 g/kg	-	-
Silicon Dioxide (Crystalline Quartz) 14808-60-7	500 mg/kg	-	-
Cellulose 9004-34-6	5 g/kg	2 g/kg	5800 mg/m ³
Sodium Silicate 1344-09-8	1153 mg/kg	4640 mg/kg	-

Chemical Name	LD50 (oral, rat)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat)
Potassium Silicate 1312-76-1	1300 mg/kg	-	-
Calcium Carbonate 1317-65-3	-	-	-
Feldspar 68476-25-5	-	-	-
Calcium Fluoride 7789-75-5	4250 mg/kg	-	-
Black Iron Oxide - Magnetite 1309-38-2	-	-	-
Aluminum Oxide 1344-28-1	5000 mg/kg	-	-
Bentonite Clay 1302-78-9	5000 mg/kg	-	-
Strontium Carbonate 1633-05-2	-	-	-
Silicate, Mica 12001-26-2	-	-	-

Synergistic Products

None known

Specific Hazards

The ACGIH recommended general limit for welding fume NOC (Not Otherwise Classified) is 5 mg/m³. Copper dust and fume affect the respiratory system, lungs, skin, liver and eyes. 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.

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

Nickel and its compounds are required to be considered carcinogenic by OSHA. Long term overexposure to nickel compounds may cause lung fibrosis or pneumoconiosis. Studies of nickel refinery workers indicated higher incidence of lung and nasal cancers. 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
Manganese	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Silicon	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Chromium	A4	Not Listed	Not Listed	Not Listed	Not Listed
Nickel	A5	Group 2B	Not Listed	Reasonably Anticipated To Be A Human Carcinogen	Listed
Molybdenum	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Copper	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Niobium	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Titanium dioxide	A4	Group 2B	Not Listed	Not Listed	Listed
Dolomite	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Sodium aluminum fluoride	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Silicon Dioxide (Crystalline Quartz)	A2	Group 1	Known Human Carcinogen	Not Listed	Listed
Cellulose	Not Listed	Not Listed	Not Listed	Not Listed	Not 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
Calcium Carbonate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Feldspar	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Calcium Fluoride	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Black Iron Oxide - Magnetite	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Aluminum Oxide	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Bentonite Clay	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Strontium Carbonate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
Silicate, Mica	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Nickel

Water Flea Data

Daphnia magna EC50=1 mg/L (48 h)

Daphnia magna EC50>100 mg/L (48 h)

Potassium Silicate

Water Flea Data

Daphnia magna EC50=216 mg/L (96 h)

Sodium Silicate

Water Flea Data

Daphnia magna EC50=216 mg/L (96 h)

Copper

Water Flea Data

Daphnia magna EC50=0.03 mg/L (48 h)

13. DISPOSAL CONSIDERATIONS

Disposal Information

Material should be recycled if at all possible.

Waste from residues / unused products

Dispose in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

DOT

Not Regulated.

TDG

Not Regulated

15. REGULATORY INFORMATION

Chemical Name	US EPA SARA 313 Emission Reporting
Manganese	Listed
Chromium	Listed
Nickel	Listed
Copper	Listed
Feldspar	Listed
Aluminum Oxide	Listed

State Regulations

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
Manganese	Not Listed	Listed	Not Listed
Silicon	Not Listed	Listed	Not Listed

Chromium	Not Listed	Listed	Not Listed
Nickel	Listed	Listed	Carcinogen
Molybdenum	Not Listed	Listed	Not Listed
Copper	Not Listed	Listed	Not Listed
Niobium	Not Listed	Not Listed	Not Listed
Titanium dioxide	Not Listed	Listed	Carcinogen
Doloma	Not Listed	Not Listed	Not Listed
Sodium aluminum fluoride	Listed	Not Listed	Not Listed
Silicon Dioxide (Crystalline Quartz)	Not Listed	Listed	Carcinogen
Cellulose	Not Listed	Listed	Not Listed
Sodium Silicate	Not Listed	Not Listed	Not Listed
Potassium Silicate	Not Listed	Not Listed	Not Listed
Calcium Carbonate	Not Listed	Listed	Not Listed
Feldspar	Not Listed	Not Listed	Not Listed
Calcium Fluoride	Not Listed	Not Listed	Not Listed
Black Iron Oxide - Magnetite	Not Listed	Not Listed	Not Listed
Aluminum Oxide	Not Listed	Listed	Not Listed
Bentonite Clay	Not Listed	Not Listed	Not Listed
Strontium Carbonate	Not Listed	Not Listed	Not Listed
Silicate, Mica	Not Listed	Listed	Not Listed

WARNING: This product contains a chemical(s) known to the state of California to cause cancer

International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA
Manganese	X	X	-	X
Silicon	X	X	-	X
Chromium	X	X	-	X
Nickel	X	X	-	X
Molybdenum	X	X	-	X
Copper	X	X	-	X
Niobium	X	X	-	X
Titanium dioxide	X	X	-	X
Doloma	X	-	X	X
Sodium aluminum fluoride	X	X	-	X
Silicon Dioxide (Crystalline Quartz)	X	X	-	X
Cellulose	X	X	-	X
Sodium Silicate	X	X	-	X
Potassium Silicate	X	X	-	X
Calcium Carbonate	X	-	X	X
Feldspar	X	-	X	X
Calcium Fluoride	X	X	-	X
Black Iron Oxide - Magnetite	X	X	-	X
Aluminum Oxide	X	X	-	X
Bentonite Clay	X	X	-	X
Strontium Carbonate	X	X	-	X
Silicate, Mica	-	X	-	-

Product code **CW1880**

Product name **CRONAWEAR
7770**

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

NFPA

Health - 2
Flammability - 0
Reactivity - 0

Prepared By

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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.