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Revision Number 2

1. IDENTIFICATION

Product identification

Product identifier	Cronatron™ 7355 Carbide Hardfacing Stick Rod Electrode
Other means of identification	CW1918
Recommended use	Brazing Alloy, Welding Alloy
Restrictions on use	For industrial use only, These items are only intended for normal welding purposes

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 product is normally not considered hazardous as shipped. Avoid contact with eyes. Avoid inhalation of dust from the product. When this product is used in a welding process the most important hazards are: heat, radiation, electric shock and welding fumes.

Hazardous to the aquatic environment

Category 1

Symbol



Signal word WARNING

Hazard statements H400 - Very toxic to aquatic life

Precautionary statements

Prevention P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing and eye/face protection

Response

Eyes P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Spill P391 - Collect spillage

Storage P402 - Store in a dry place

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) None known.

Unknown acute toxicity None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical name	CAS-No	Weight %
Iron	7439-89-6	50-60
Chromium	7440-47-3	25-35
Quartz (Crystalline Silica)	14808-60-7	1-5
Carbon	7440-44-0	1-5
Calcium Fluoride	14542-23-5	1-5
Calcium Carbonate	1317-65-3	1-11
Hexavalent Chromium	18540-29-9	<0.1

4. FIRST-AID MEASURES

Necessary first-aid measures

Inhalation Remove to fresh air immediately or administer oxygen. Get medical attention immediately.

Ingestion Seek medical attention immediately.

Skin contact Flush area with large quantities of water. Seek medical attention if irritation persists. Seek medical attention if irritation occurs.

Eye contact Flush with plenty of water for at least 15 minutes. Get medical attention.

Most important symptoms (acute) Electric shock can kill. For electric shock, disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live wire parts or wires. Immediately contact a physician.

Most important symptoms (over-exposure) Not applicable.

Indication of any immediate medical attention and Not applicable.

special treatment needed

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Alcohol resistant foam. Water spray. Dry chemical. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Not applicable.
Specific hazards	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Welding arcs and sparks can ignite combustible and flammable materials. Use the extinguishing media recommended for the burning material and fire situation. Hazardous Thermal Decomposition Products: Chromium oxide. hydrogen fluoride. Calcium oxide. Oxides of carbon. Iron Oxide.
Special protective equipment for fire-fighters	Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use personal protection recommended in Section 8. For waste disposal, see section 13 of the SDS.
Methods and materials for containment and cleaning up	Solid objects may be picked up and placed in a container. Make sure the solid objects are at room temperature before handling. Liquids or pastes should be scooped up and placed into a container. Wear proper protective equipment while handling these materials. Do not discard as refuse.

7. HANDLING AND STORAGE

Precautions for safe handling	Handle with care to avoid stings or cuts. Wear gloves when handling welding consumables. Avoid exposure to dust and do not ingest. Some individuals may develop an allergic reaction to certain materials. Retain all warning and identity labels.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry and well-ventilated place. Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	OSHA PEL (TWA)	ACGIH OEL (TWA)	NIOSH - TWA
Iron	-	-	-
Chromium	1 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA
Quartz (Crystalline Silica)	50 µg/m ³ TWA 50 µg/m ³ TWA	0.025 mg/m ³ TWA	0.05 mg/m ³ TWA
Carbon	-	-	-
Calcium Fluoride	2.5 mg/m ³ TWA	2.5 mg/m ³ TWA	2.5 mg/m ³ TWA
Calcium Carbonate	15 mg/m ³ TWA 5 mg/m ³ TWA	-	10 mg/m ³ TWA 5 mg/m ³ TWA
Hexavalent Chromium	5 µg/m ³ TWA 5 µg/m ³ TWA	-	0.0002 mg/m ³ TWA

Appropriate engineering controls	Avoid exposure to welding fumes, radiation, spatter, electric shock, heated materials and dust. Ensure adequate ventilation. Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area. Keep workplace and protective clothing clean and dry. Train the welder not to touch live electrical parts and to insulate himself from work and ground. Check condition of protective clothing and
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equipment on a regular basis. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Processing may form hazardous compounds, refer to section 10.

Individual protection measures, such as personal protective equipment

- Eye protection** Welder's helmet or face shield with color absorbing lenses. Shield and filter to provide protection from harmful UV radiation, infrared and molten metal approved to standard EN379. Filter shade to be a minimum of shade 9.
- Skin and body protection** Heat-resistant protective clothing. Wear safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry. Clothing should be selected to suit the level, duration and purpose of the welding activity. Wear appropriate gloves to prevent skin contact. Wear welding gloves.
- Respiratory protection** Use an air purifying dust respirator when welding or brazing in a confined space, or when local exhaust or ventilation is not sufficient to keep exposure values within safe limits.
- Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

Canadian Province Occupational Exposure Limits

Chemical name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick - OEL	Newfoundland and Labrador - OEL	Nova Scotia - OEL	Ontario OEL	Prince Edward Island - OEL	Quebec OEL	Saskatchewan - OEL
Iron	-	-	-	-	-	-	-	-	-	-
Chromium	0.5 mg/m ³ TWA	0.5mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA	0.5 mg/m ³ TWAEV	1.5 mg/m ³ STEL 0.5 mg/m ³ TWA
Quartz (Crystalline Silica)	0.025 mg/m ³ TWA	0.025mg/m ³ TWA	0.025 mg/m ³ TWA	0.1 mg/m ³ TWA	0.025 mg/m ³ TWA	0.025 mg/m ³ TWA	0.10 mg/m ³ TWA	0.025 mg/m ³ TWA	0.1 mg/m ³ TWAEV	0.05 mg/m ³ TWA
Carbon	-	-	-	-	-	-	-	-	-	-
Calcium Fluoride	2.5 mg/m ³ TWA	2.5mg/m ³ TWA	2.5 mg/m ³ TWA	2.5 mg/m ³ TWA	2.5 mg/m ³ TWA	2.5 mg/m ³ TWA	2.5 mg/m ³ TWA	2.5 mg/m ³ TWA	2.5 mg/m ³ TWAEV	5 mg/m ³ STEL 2.5 mg/m ³ TWA
Calcium Carbonate	10 mg/m ³ TWA	20mg/m ³ STEL 10mg/m ³ TWA 3mg/m ³ TWA	-	10 mg/m ³ TWA	-	-	-	-	10 mg/m ³ TWAEV	20 mg/m ³ STEL 10 mg/m ³ TWA
Hexavalent Chromium	0.5 mg/m ³ TWA	-	-	-	-	-	-	-	-	1.5 mg/m ³ STEL 0.5 mg/m ³ TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** Solid
- Color** Metallic
- Odor** Odorless
- Odor threshold** Not applicable

pH	Not applicable
Melting point/range °C	850 - 1100 °C
Melting point/range °F	1560 - 2000 °F
Boiling point/range °C	Not available
Boiling point/range °F	Not available
Flash point °C / °F	Not applicable
Evaporation rate	Not applicable
Flammability (Solid, Gas)	Not available
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	Not available
Solubility	Insoluble in water
Partition coefficient (n-octanol/water)	Not applicable
Autoignition temperature °C	Not applicable
Autoignition temperature °F	Not applicable
Decomposition temperature °C	Not available
Decomposition temperature °F	Not available
Viscosity	Not available

10. STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Contact with chemical substances like acids or strong bases could cause generation of gas.
Conditions to avoid	Stable under normal conditions.
Incompatible materials	Incompatible with acids.
Hazardous decomposition products	When this product is used in a welding process, hazardous decomposition products would include those from volatilization, reaction or oxidation of the materials listed in section 3 and those from the base metal and coating. The amount of fumes generated from this product varies with welding parameters and dimensions. Refer to applicable national exposure limits for the fume compounds. Reasonably expected gaseous products would include: carbon oxides. Nitrogen oxides (NOx). Ozone. Air contaminants around the welding area can be affected by the welding process and influence the composition and quality of fumes and

gases produced.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Dermal. Inhalation.

Symptoms

Prolonged inhalation may be harmful. Welding fumes cannot be classified simply. Their composition and quantity are dependent upon the metal being welded, the process, procedures and electrodes being used. Overexposure to welding fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat or eyes. Repeated or prolonged exposure to respirable crystalline silica may cause chronic lung injury (silicosis). Silicosis is a disabling pulmonary fibrosis characterized by fibrotic changes and military nodules in the lungs, a dry cough, shortness of breath, emphysema, decreased chest expansion and increased susceptibility to tuberculosis. May cause sensitization by skin contact.

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

Overexposure to welding fumes may affect pulmonary function and eyes. Prolonged inhalation of crystalline silica above safe exposure limits can cause cancer.

Numerical measures of toxicity

Chemical name	Inhalation LC50:	Dermal LD50:	Oral LD50:
Iron	-	-	= 30 g/kg (Rat)
Chromium	-	-	-
Quartz (Crystalline Silica)	-	-	-
Carbon	-	-	> 10000 mg/kg (Rat)
Calcium Fluoride	-	-	= 4250 mg/kg (Rat)
Calcium Carbonate	-	-	-
Hexavalent Chromium	-	-	-

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 RTK Carcinogens	NTP
Iron	-	-	-	-
Chromium	A4	Group 3	-	-
Quartz (Crystalline Silica)	A2	Group 1	Listed	Known Carcinogen
Carbon	-	-	-	-
Calcium Fluoride	-	Group 3	-	-
Calcium Carbonate	-	-	-	-
Hexavalent Chromium	-	Group 1	Listed	Known Carcinogen

Canadian Province

carcinogenicity limits

Chemical name	Alberta - Carcinogen	British Columbia - Carcinogen	Manitoba - Carcinogen	New Brunswick - Carcinogen	Nova Scotia - Carcinogen	Quebec - Carcinogen
Iron	-	-	-	-	-	-
Chromium	-	-	ACGIH A4	ACGIH A4	ACGIH A4	-
Quartz (Crystalline Silica)	A2 - Suspected Human Carcinogen	IARC 1 ACGIH A2	ACGIH A2	-	ACGIH A2	C2 carcinogen
Carbon	-	-	-	-	-	-
Calcium Fluoride	-	-	ACGIH A4	ACGIH A4	ACGIH A4	-
Calcium Carbonate	-	-	-	-	-	-
Hexavalent Chromium	-	IARC 1	-	-	-	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish
Iron	-	13.6: 96 h <i>Morone saxatilis</i> mg/L LC50 static
Chromium	-	-
Quartz (Crystalline Silica)	-	-
Carbon	-	-
Calcium Fluoride	-	-
Calcium Carbonate	-	-
Hexavalent Chromium	-	36.2: 96 h <i>Pimephales promelas</i> mg/L LC50 7.6: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50

Persistence and degradability Not readily biodegradable.

Bioaccumulation

Chemical name	CAS-No	Partition coefficient (log Kow)
Iron 7439-89-6	7439-89-6	-
Chromium 7440-47-3	7440-47-3	-
Quartz (Crystalline Silica) 14808-60-7	14808-60-7	-
Carbon 7440-44-0	7440-44-0	-
Calcium Fluoride 14542-23-5	14542-23-5	-
Calcium Carbonate 1317-65-3	1317-65-3	-
Hexavalent Chromium 18540-29-9	18540-29-9	-

Mobility in soil This product is not mobile in the soil.

Other adverse effects Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

13. DISPOSAL CONSIDERATIONS

Disposal information As supplied, this product is a RCRA Hazardous Waste. Discard container or liner in accordance with federal, state, and local 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
Iron	7439-89-6	-	-	-
Chromium	7440-47-3	-	-	-
Quartz (Crystalline Silica)	14808-60-7	-	-	-
Carbon	7440-44-0	-	-	-
Calcium Fluoride	14542-23-5	-	-	-
Calcium Carbonate	1317-65-3	-	-	-
Hexavalent Chromium	18540-29-9	-	-	-

Special Precautions Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. REGULATORY INFORMATION

State regulations

U.S. state Right-to-Know regulations

Chemical name	CAS-No	Massachusetts - RTK	New Jersey - RTK	Pennsylvania - RTK
Iron	7439-89-6	-	-	-
Chromium	7440-47-3	X	X	X
Quartz (Crystalline Silica)	14808-60-7	X	X	X
Carbon	7440-44-0	-	-	-
Calcium Fluoride	14542-23-5	-	X	-
Calcium Carbonate	1317-65-3	X	X	X
Hexavalent Chromium	18540-29-9	-	X	X

California Prop. 65

Chemical name	CAS-No	California Prop. 65
Iron	7439-89-6	-
Chromium	7440-47-3	-
Quartz (Crystalline Silica)	14808-60-7	Carcinogen
Carbon	7440-44-0	-
Calcium Fluoride	14542-23-5	-
Calcium Carbonate	1317-65-3	-
Hexavalent Chromium	18540-29-9	Carcinogen Developmental Female Reproductive Male Reproductive

U.S. Federal Regulations

US EPA SARA 313

Chemical name	CAS-No	CERCLA/SARA Hazardous Substances RQ	SARA 313 - Threshold Values
Iron	7439-89-6	-	-
Chromium	7440-47-3	5000 lb 2270 kg 10 lb 4.54 kg	1.0 %
Quartz (Crystalline Silica)	14808-60-7	-	-
Carbon	7440-44-0	-	-
Calcium Fluoride	14542-23-5	-	-
Calcium Carbonate	1317-65-3	-	-
Hexavalent Chromium	18540-29-9	10 lb 4.54 kg	0.1 %

**US EPA SARA 311/312
hazardous categorization**

Not applicable

Chemical name	DSL/NDSL	Inventory - United States - Section 8(b) Inventory (TSCA)	U.S. - TSCA (Toxic Substances Control Act) - Section 12(b) - Export Notification
Iron	X	X	-
Chromium	X	X	-
Quartz (Crystalline Silica)	X	X	-
Carbon	X	X	-
Calcium Fluoride	X	X	-
Calcium Carbonate	X	X	-
Hexavalent Chromium	-	-	X

Legend X - Listed

16. OTHER INFORMATION

NFPA

Health	Not available
Flammability	Not available
Instability	Not available

HMIS

Health	Not available
Flammability	Not available
Physical hazards	Not available

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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