

Material Safety Data Sheet: CRYO-ULTRALITE WEAR PLATE

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CRYO-ULTRALITE WEAR PLATE
Recommended use Wear plate
Information on Manufacturer
X-ERGON by Partsmaster, Div of NCH Corp.
P.O. Box 655326
Dallas, TX 75265-5326

Product Code 09910400
Chemical nature Inorganic solid blend
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

DANGER!

Electric shock can kill

Arc Rays can injure and burn eyes and skin

May cause sensitization by inhalation

May cause sensitization by skin contact

Welding fumes may result in discomfort

Keep out of reach of children

Color gray

Physical State Solid

Odor No information available

Potential Health Effects

Principle Route of Exposure

Inhalation, Ingestion.

Primary Routes of Entry

Inhalation

Acute Effects

Eyes

Causes eye irritation.

Skin

Causes skin irritation.

Inhalation

Welding fumes may result in discomfort such as: dizziness, nausea, or dryness or irritation of nose, throat, or eyes. Fumes can aggravate asthma, bronchial conditions, or allergies. Individuals with allergies or impaired respiratory function may have symptoms worsen by exposure to welding fumes. Excessive inhalation of iron oxides fumes or dust can lead to irritation of the respiratory tract. Inhalation may cause central nervous system effects.

Ingestion

May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Toxicity

Prolonged exposure may cause chronic effects. Inhalation of manganese fumes may affect the central nervous system, may cause spastic gait, drowsiness, paralysis and other neurological problems with symptoms including weakness and tremors resembling Parkinson's disease. Behavioral changes and changes in handwriting may also appear. Constant inhalation of chromium (VI) compounds may cause an ulceration and perforation of the nasal septum as well as liver and kidney damage. IARC has concluded that the evidence for carcinogenicity to humans and animals is inadequate for chromium metal and trivalent compounds, but sufficient for hexavalent chromium compounds. Chromium compounds are on the IARC list as posing a carcinogenic risk to humans. OSHA (29 CFR 1910.120) lists chromium as possible carcinogen. Chromium VI compounds are required by OSHA to be considered carcinogenic. Repetitive exposure to nickel oxides may lead to lung fibrosis or pneumoconiosis. Soreness and itchiness of the nose and changes in skin color and/or appearance may also result. Nickel compounds are on the IARC list as posing a carcinogenic risk to humans. OSHA (29 CFR 1910.120) lists nickel as possible carcinogen. Long term overexposure to iron fumes may lead to siderosis (iron deposits in the lung) and is believed by investigators to affect pulmonary function. Lungs will clear in time when exposure to iron and its components cease.

Target Organ Effects

Central nervous system, Respiratory system, Central Vascular System, Lymphatic System, Blood, Kidney, Lungs, Nasal Cavities.

Aggravated Medical Conditions

Skin disorders, Central nervous system, Kidney disorders, Respiratory system.

Potential Environmental Effects

See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Iron	7439-89-6	60-100
Chromium	7440-47-3	25-30
Carbon black	1333-86-4	1-4
Natural Graphite	7782-42-5	2-4
Silicon	7440-21-3	1-2
Manganese	7439-96-5	1-2
Nickel	7440-02-0	.5-1
Zirconium	7440-67-7	.5-1
Graphite	7440-44-0	.5-3

4. FIRST AID MEASURES

General advice	Avoid contact with skin, eyes and clothing. Do not breathe dust or fume.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
Skin Contact	In case of contact, immediately flush skin with soap and plenty of water. If skin irritation persists, call a physician.
Inhalation	Remove person to fresh air. If signs/symptoms continue, get medical attention.
Ingestion	Not applicable. Rinse mouth.
Notes to physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flash Point	The product is not flammable	Method	Not applicable
Autoignition Temperature	No information available.		
Upper	No data available	Lower	No data available
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.		
Specific hazards arising from the chemical	Arcs and sparks can ignite combustibles and flammable products. See American National Standard Z49.1; Safety in Welding and Cutting published by The American Welding Society .		
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.		
NFPA	Health 2	Flammability 0	Instability 0
HMIS	Health 2	Flammability 0	Instability 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Shovel into a dry metal container
Methods for Cleaning Up	Pick up and transfer to properly labeled containers.
Neutralizing Agent	Not applicable.

7. HANDLING AND STORAGE

Handling	Do not eat, drink or smoke when using this product. Ensure adequate ventilation.			
Storage	Keep in a dry place.			
Storage Temperature	Minimum	No information available	Maximum	No information available
Storage Conditions	Indoor	Outdoor	Heated	Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Iron	No data available	No data available	No data available
Chromium	TWA: 0.5 mg/m ³	TWA: 1 mg/m ³	IDLH: 250 mg/m ³ TWA: 0.5 mg/m ³
Carbon black	TWA: 3 mg/m ³	TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³
Natural Graphite	TWA: 2 mg/m ³	TWA: 15 mg/m ³ TWA: 5 mg/m ³	IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³
Silicon	No data available	TWA: 15 mg/m ³ TWA: 5 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³
Manganese	TWA: 0.2 mg/m ³	Ceiling: 5 mg/m ³	IDLH: 500 mg/m ³ STEL 3 mg/m ³ TWA: 1 mg/m ³
Nickel	TWA: 1.5 mg/m ³	TWA: 1 mg/m ³	IDLH: 10 mg/m ³ TWA: 0.015 mg/m ³
Zirconium	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 5 mg/m ³	IDLH: 50 mg/m ³ STEL 10 mg/m ³ TWA: 5 mg/m ³
Graphite	No data available	No data available	No data available

Engineering Measures Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases below the TLV's

in the worker's breathing zone and in the general area. Train the worker to keep his head out of the fumes .

Personal Protective Equipment**Eye/Face Protection**

Wear a helmet or use face shield with filter lens of appropriate shade number (SEE ANSI/ASCZ49.1) provide protective screen and flash goggles, if necessary, to shield others. As a rule of thumb, start a shade that is too dark to see the weld zone. Then go next lighter shade which gives sufficient view of the weld zone .

Skin Protection**Respiratory Protection**

Welder's leather gloves, Wear fire/flammable resistant/retardant clothing.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gasses below the TLV's in the workers' breathing zone and the general area. Train the worker to keep his head out of the fumes. Use MSHA/NIOSH approved or equivalent fume respirator or air supplied respirator when welding in a confined space or when local exhaust or ventilation does not keep exposure below TLV.

General Hygiene Considerations

Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid	Viscosity	Not applicable
Color	gray	Odor	No information available
Appearance	Textured black paste	pH	Not applicable
Specific Gravity	8	Evaporation Rate	No information available
Percent Volatile (Volume)	No information available	VOC Content (%)	Not applicable
Vapor Pressure	Not applicable	Vapor Density	Not applicable
Solubility	Insoluble	Melting Point/Range	2192 - 2732 °F / 1200 - 1500 °C
Boiling Point/Range	No data available		

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions.

Conditions to Avoid

Exposure to air or moisture over prolonged periods

Incompatible Products

Strong oxidizing agents

Hazardous Decomposition Products

Fumes and gasses produced by welding, brazing and similar processes cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, the procedures and the filler metal being used. Other conditions which also influence the composition and quantity of fumes and gases to which the worker may be exposed include: coatings on the metal being welded, the number of welders and the volume of the work space, the quality and amount of ventilation used, the position of the welder's head in relation to the fume plume, as well as the presence of contaminants in the atmosphere when the filler metal is consumed. The fume and gas decomposition products generated are different in percent and form the product ingredients listed in Section III. The products formed in normal operation include those originating from the volatilization, reaction and oxidation of the filler metal, the metal being welded, the coatings, etc. as noted above. One recommended way to determine the composition and quality of fumes and gases to which workers are exposed is to take an air sample inside the welders helmet if worn or in the workers breathing zone. See ANSI/AWS F1.1 "Method For Sampling Airborne Particles Generated By Welding And Allied Processes" available from the American Welding Society, P.O. Box 35140, Miami, FL 33135

Possibility of Hazardous Reactions

None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information**Acute Toxicity**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Iron	= 984 mg/kg (Rat)	no data available	no data available	no data available	no data available
Chromium	no data available	no data available	no data available	no data available	no data available
Carbon black	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	no data available	no data available	no data available
Natural Graphite	no data available	no data available	no data available	no data available	no data available
Silicon	= 3160 mg/kg (Rat)	no data available	no data available	no data available	no data available
Manganese	= 9 g/kg (Rat)	no data available	no data available	no data available	no data available
Nickel	> 9000 mg/kg (Rat)	no data available	no data available	no data available	no data available
Zirconium	no data available	no data available	no data available	no data available	no data available

Graphite	> 10000 mg/kg (Rat)	no data available	no data available	no data available	no data available
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Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Iron	no data available	no data available	no data available	no data available	no data available
Chromium	no data available	no data available	no data available	no data available	eyes, respiratory system, skin
Carbon black	no data available	no data available	no data available	no data available	eyes, respiratory system
Natural Graphite	no data available	no data available	no data available	no data available	respiratory system, CVS (listed under Graphite (synthetic)) respiratory system, CVS
Silicon	no data available	no data available	no data available	no data available	eyes, respiratory system, skin
Manganese	no data available	no data available	no data available	no data available	CNS, respiratory system, blood, kidneys
Nickel	no data available	no data available	no data available	no data available	nasal cavities, lungs, skin (lung and nasal cancer) lungs, skin, nasal cavities (lung and nasal cancer)
Zirconium	no data available	no data available	no data available	no data available	skin, respiratory system
Graphite	no data available	no data available	no data available	no data available	respiratory system, CVS

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
Iron	not applicable	not applicable	not applicable	not applicable	not applicable
Chromium	not applicable	not applicable	not applicable	not applicable	not applicable
Carbon black	A3	Group 2B	not applicable	X	X
Natural Graphite	not applicable	not applicable	not applicable	not applicable	not applicable
Silicon	not applicable	not applicable	not applicable	not applicable	not applicable
Manganese	not applicable	not applicable	not applicable	not applicable	not applicable
Nickel	not applicable	Group 1 Group 2B	Known Reasonably Anticipated	X	not applicable
Zirconium	not applicable	not applicable	not applicable	not applicable	not applicable
Graphite	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information

No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Iron	no data available	LC50 = 13.6 mg/L <i>Morone saxatilis</i> 96 h LC50 = 0.56 mg/L <i>Cyprinus carpio</i> 96 h	no data available	no data available	N/A
Chromium	no data available	no data available	no data available	no data available	N/A
Carbon black	no data available	no data available	no data available	EC50> 5600 mg/L 24 h	N/A
Natural Graphite	no data available	no data available	no data available	no data available	N/A
Silicon	no data available	no data available	no data available	no data available	N/A
Manganese	no data available	no data available	no data available	no data available	N/A
Nickel	EC50 = 0.18 mg/L <i>Pseudokirchneriella subcapitata</i> 72 h EC50 0.174 - 0.311 mg/L <i>Pseudokirchneriella subcapitata</i> 96 h	LC50 > 100 mg/L <i>Brachydanio rerio</i> 96 h LC50 = 1.3 mg/L <i>Cyprinus carpio</i> 96 h LC50 = 10.4 mg/L <i>Cyprinus carpio</i> 96 h	no data available	EC50> 100 mg/L 48 h EC50= 1 mg/L 48 h	N/A
Zirconium	no data available	no data available	no data available	no data available	N/A
Graphite	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of in accordance with local regulations.

Container Disposal

No information available.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Chromium	7440-47-3	25-30	1.0
Manganese	7439-96-5	1-2	1.0
Nickel	7440-02-0	.5-1	0.1

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Iron	Not applicable	Not applicable
Chromium	5000 lb	Not applicable
Carbon black	Not applicable	Not applicable
Natural Graphite	Not applicable	Not applicable
Silicon	Not applicable	Not applicable
Manganese	Not applicable	Not applicable
Nickel	100 lb	Not applicable
Zirconium	Not applicable	Not applicable
Graphite	Not applicable	Not applicable

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Component	CAS-No	California Prop. 65
Carbon black	1333-86-4	carcinogen
Nickel	7440-02-0	carcinogen
Chromium	7440-47-3	carcinogen, initial date 2/27/87, developmental female, male 12/19/08

Canada

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

WHMIS Hazard Class

D2A Very toxic materials, D2B Toxic materials.



16. OTHER INFORMATION

Prepared By	Christopher Drogin
Supercedes Date	07/03/2012
Issuing Date	06/19/2013
Reason for Revision	No information available.
Glossary	No information available.

List of References.

No information available.

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