

Safety Data Sheet: 1000HPM ELECTRODE

Supersedes Date 12/21/2011

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name 1000HPM ELECTRODE
Recommended use Welding
Information on Manufacturer
X-ERGON by Partsmaster, Div of NCH Corp.
P.O. Box 655326
Dallas, TX 75265-5326

Product Code 0022000L
Chemical nature Inorganic solid blend
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARD IDENTIFICATION

Color Red

Physical State Solid

Odor No information available

GHS

Classification

Physical Hazards

None

Health Hazard

Acute Oral Toxicity
Skin Corrosion/Irritation
Skin Sensitization
Carcinogenicity
Specific target organ systemic toxicity (repeated exposure)
Acute Aquatic Toxicity
Chronic Aquatic Toxicity

Category 5
Category 3
Category 1
Category 1A
Category 1
Category 1
Category 1

Other hazards

None

Labeling

Signal Word

DANGER



Hazard Statements

H303 - May be harmful if swallowed
H316 - Causes mild skin irritation
H317 - May cause an allergic skin reaction
H350 - May cause cancer
H372 - Causes damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust or fume
P270 - Do not eat, drink or smoke when using this product
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace
P363 - Wash contaminated clothing before reuse
P281 - Use personal protective equipment as required
P321 - Specific treatment (see supplemental first aid instructions on this label)
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water
P308 + P313 - IF exposed or concerned: Get medical attention/advice
P333 + P313 - If skin irritation or rash occurs, get medical attention
P405 - Store locked up
P273 - Avoid release to the environment
P501 - Dispose of contents and container to an approved waste disposal plant.

35 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Chromium	7440-47-3	25-30
Nickel	7440-02-0	5-10
Manganese	7439-96-5	1-5
Titanium dioxide	13463-67-7	5-10
Bentonite	1302-78-9	1-5

Potassium silicate	1312-76-1	1-5
Calcium carbonate	1317-65-3	1-5
Feldspar	68476-25-5	1-5
Calcium Fluoride	7789-75-5	1-5

4. FIRST AID MEASURES

General advice	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
Inhalation	Remove from the area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.
Ingestion	If swallowed, do not induce vomiting - seek medical advice.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point	The product is not flammable	Method	Not applicable
Upper	No data available	Lower	No data available
Suitable Extinguishing Media	Carbon dioxide (CO ₂). Dry chemical. Foam. Water spray.		
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	Wear appropriate protective clothing. Avoid creating dusty conditions. Transfer solid into a properly labeled container for re-use or disposal. If necessary, wash area with water and pick up wash water for disposal. Use personal protective equipment.
Environmental Precautions	Prevent product from contaminating soil or from entering sewage, drainage systems, and bodies of water . Do not flush into surface water or sanitary sewer system.
Methods for Containment	No information available
Methods for Cleaning Up	Shovel or vacuum any spilled material into a suitable container. Alloy wastes are normally collected to recover metal value . Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Neutralizing Agent	Not applicable.

7. HANDLING AND STORAGE

Handling	Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Keep out of the reach of children. Avoid contact with skin, eyes and clothing. Keep away from clothing and other combustible materials.
Storage	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.
Storage Temperature	Minimum No information available Maximum No information available
Storage Conditions	Indoor X Outdoor Heated Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Chromium	TWA: 0.5 mg/m ³	TWA: 1 mg/m ³	IDLH: 250 mg/m ³ TWA: 0.5 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
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
Titanium dioxide	TWA: 10 mg/m ³	TWA: 15 mg/m ³	IDLH: 5000 mg/m ³
Bentonite	TWA: 1 mg/m ³	No data available	No data available
Potassium silicate	No data available	No data available	No data available
Calcium carbonate	No data available	TWA: 15 mg/m ³ TWA: 5 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³
Feldspar	No data available	No data available	No data available
Calcium Fluoride	TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³	No data available

Engineering Measures

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.

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. Safety glasses with side-shields.

Skin Protection

Welder's leather gloves, Wear fire/flame resistant/retardant clothing, Wear suitable protective clothing, Impervious gloves.

Respiratory Protection

Use a NIOSH/MSHA approved or equivalent fume respirator or air supplied respirator when welding in confined spaces, or where local exhaust or ventilation does not keep exposure below TLV's.

General Hygiene Considerations

Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing. Wear head and body protection which help to prevent injury from radiation, sparks, and electrical shock. See ANSI Z49.1. At minimum, this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hat, shoulder protection as well as dark nonsynthetic clothing. Train the welder not to touch live electrical parts and to insulate himself from work and ground. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid	Viscosity	Not applicable
Color	Red	Odor	No information available
Odor Threshold	Not applicable	Appearance	Textured black paste
pH	Not applicable	Specific Gravity	> 6
Evaporation Rate	Not applicable	Percent Volatile (Volume)	No information available
VOC Content (%)	No information available	Vapor Pressure	Not applicable
Vapor Density	Not applicable	Solubility	Insoluble
n-Octanol/Water Partition	No data available	Melting Point/Range	1560 - 2000 °F / 849 - 1100 °C
Decomposition Temperature	No data available	Boiling Point/Range	55000 30538
Flammability (solid, gas)	No data available	Method	Not applicable
Flash Point	The product is not flammable		
Autoignition Temperature	No information available.		
Upper	No data available		
Lower	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

Incompatible with oxidizing agents, Strong acids.

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

Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION**Product Information**

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure Inhalation

Primary Routes of Entry Inhalation

Acute Effects

Eyes	Causes eye irritation.
Skin	May cause allergic skin reaction.
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. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Ingestion

Chronic Toxicity May cause sensitization by skin contact.

Target Organ Effects Blood, Central nervous system, Kidney, Lungs, Nasal Cavities, Respiratory system.

Aggravated Medical Conditions Skin disorders, Central nervous system, Kidney disorders, Respiratory system.

Component Information**Acute Toxicity**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Chromium	no data available	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
Manganese	= 9 g/kg (Rat)	no data available	no data available	no data available	no data available
Titanium dioxide	> 10000 mg/kg (Rat)	no data available	no data available	no data available	no data available
Bentonite	> 5000 mg/kg (Rat)	no data available	no data available	no data available	no data available
Potassium silicate	= 1300 mg/kg (Rat)	no data available	no data available	no data available	no data available
Calcium carbonate	= 6450 mg/kg (Rat)	no data available	no data available	no data available	no data available
Feldspar	no data available	no data available	no data available	no data available	no data available
Calcium Fluoride	= 4250 mg/kg (Rat)	no data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Chromium	no data available	no data available	no data available	no data available	eyes, respiratory system, skin
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)
Manganese	no data available	no data available	no data available	no data available	CNS, respiratory system, blood, kidneys
Titanium dioxide	no data available	no data available	no data available	no data available	respiratory system
Bentonite	no data available	no data available	no data available	no data available	no data available
Potassium silicate	no data available	no data available	no data available	no data available	no data available
Calcium carbonate	no data available	no data available	no data available	no data available	eyes, respiratory system, skin
Feldspar	no data available	no data available	no data available	no data available	no data available
Calcium Fluoride	no data available	no data available	no data available	no data available	no data available

Carcinogenicity

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

Component	ACGIH	IARC	NTP	OSHA	Other
Chromium	not applicable	not applicable	not applicable	not applicable	not applicable
Nickel	not applicable	Group 1 Group 2B	Known Reasonably Anticipated	X	not applicable
Manganese	not applicable	not applicable	not applicable	not applicable	not applicable
Titanium dioxide	A4	Group 2B	not applicable	X	not applicable

Bentonite	not applicable	not applicable	not applicable	not applicable	not applicable
Potassium silicate	not applicable	not applicable	not applicable	not applicable	not applicable
Calcium carbonate	not applicable	not applicable	not applicable	not applicable	not applicable
Feldspar	not applicable	Group 2B	not applicable	not applicable	not applicable
Calcium Fluoride	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
Chromium	no data available	no data available	no data available	no data available	N/A
Nickel	EC50 = 0.18 mg/L Pseudokirchneriella subcapitata 72 h EC50 0.174 - 0.311 mg/L Pseudokirchneriella subcapitata 96 h	LC50 > 100 mg/L Brachydanio rerio 96 h LC50 = 1.3 mg/L Cyprinus carpio 96 h LC50 = 10.4 mg/L Cyprinus carpio 96 h	no data available	EC50 > 100 mg/L 48 h EC50 = 1 mg/L 48 h	N/A
Manganese	no data available	no data available	no data available	no data available	N/A
Titanium dioxide	no data available	no data available	no data available	no data available	N/A
Bentonite	no data available	LC50 8.0 - 19.0 g/L Salmo gairdneri 96 h LC50 = 19000 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A
Potassium silicate	no data available	LC50 301 - 478 mg/L Lepomis macrochirus 96 h LC50 = 3185 mg/L Brachydanio rerio 96 h	no data available	EC50 = 216 mg/L 96 h	N/A
Calcium carbonate	no data available	no data available	no data available	no data available	N/A
Feldspar	no data available	no data available	no data available	no data available	N/A
Calcium Fluoride	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

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

14. TRANSPORT INFORMATION

DOT

Not regulated

TDG

Not regulated

Proper shipping name
Description

Environmentally hazardous substance, solid, n.o.s.
.?1 Environmentally hazardous substance, solid, n.o.s.?2

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
Nickel	7440-02-0	5-10	0.1
Manganese	7439-96-5	1-5	1.0
Feldspar	68476-25-5	1-5	1.0

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
Chromium	5000 lb	Not applicable
Nickel	100 lb	Not applicable
Manganese	Not applicable	Not applicable
Titanium dioxide	Not applicable	Not applicable
Bentonite	Not applicable	Not applicable
Potassium silicate	Not applicable	Not applicable
Calcium carbonate	Not applicable	Not applicable
Feldspar	Not applicable	Not applicable
Calcium Fluoride	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
Nickel	7440-02-0	carcinogen
Titanium dioxide	13463-67-7	carcinogen
Hexavalent chromium	18540-29-9	carcinogen developmental toxicity male reproductive toxicity female reproductive toxicity

16. OTHER INFORMATION

Prepared By
Supersedes Date
Issuing Date
Reason for Revision
Glossary
List of References.

Christopher Drogin
12/21/2011
06/03/2013
No information available.
No information available.
1. Threshold Limit Values for chemical substances and physical agents and biological exposure indices, ACGIH, 2007.
2. OSHA PEL
3. Vendor's MSDS
4. Registry of toxic effects of chemical substances, CCINFOWeb, 2007
5. European Chemical Substances Information System (ESIS), International Uniform Chemical Information Database (IUCLID) Chemical Data Sheets
6. ChemADVISOR, Inc. Database Release: 2007-4

All the components of this product are in compliance with the Toxic Substances Control Act (TSCA) and are either listed on the TSCA inventory or otherwise exempted from listing

IRR: Irritant, OSHA: Occupational Safety & Health Administration, IARC: International Agency for the Research on Cancer, TOX: Toxic, NFPA: National Fire Protection Association, ppm: Parts Per Million, UEL: Upper Explosion Limit, STEL: Short-term Exposure Limit, HMN: Human, mg/m³, IHL: Inhalation, COMB: Combustible, CORR: Corrosive, MUT: Mutagenic, CARC: Carcinogenic, N/A: Not Applicable, TLV: Threshold Limit Value, N/E: Not Established, ORL: Oral, FLAM: Flammable, ASPHYX: Asphyxiant, C.O.C.: Cleveland Open Cup, PNOR: Particles Not Otherwise Regulated, LEL: Lower Explosion Limit, mg/L: Milligrams per Liter, PNOS: Particles Not Otherwise Specified, g/L: Grams per Liter, PMCC: Pensky-Martin Closed Cup, NTP: National Toxicology Program, µg/L: Micrograms per Liter, TCC: Tagliabue Closed Cup, SEV: Severe, RBT: Rabbit, INV: Intravenous, ACGIH: American Conference of Governmental Industrial Hygienists, PEL: Permissible Exposure Limit, MOD: Moderate, IPT: Intraperitoneal, gm/kg: Grams per Kilogram, C.C.C.: Cleveland Closed Cup, SKN: Skin, Milligrams per Cubic Meter, mg/kg: Milligrams per Kilogram, VOC: Volatile Organic Compound, SDT: Standard Draize Test, MSE: Mouse, GPG: Guinea Pig

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