

Safety Data Sheet STAIN-PLUS ELECTRODE

Supersedes Date 06/04/2013

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name STAIN-PLUS 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 12430001

Chemical nature Inorganic solid blend

Emergency Telephone Number

CHEMTREC® 800-424-9300

Telephone inquiry

800-336-0450

2. HAZARD IDENTIFICATION

Color Light Straw

Physical state Solid

Odor Odorless

Mixture or Pure Substance: Mixture

This Safety Data Sheet (SDS) was prepared in accordance with OSHA 2012 - 29 CFR 1910.1200, "Hazard Communication".

GHS

Classification

Physical Hazards

Health Hazard

Acute Oral Toxicity

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Skin sensitization

Carcinogenicity

Specific target organ toxicity (repeated exposure)

Category 5

Category 2

Category 2

Category 1

Category 2

Category 1

Other hazards

Arc Rays can injure and burn eyes and skin Electric shock can kill FUMES AND GASES can be hazardous to your health.

Labeling

Signal Word

DANGER



Hazard statements

H318 - Causes serious eye damage

H315 - Causes skin irritation

H303 - May be harmful if swallowed

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H372 - Causes damage to organs through prolonged or repeated exposure

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.

P281 - Use personal protective equipment as required

P280 - Wear protective gloves, protective clothing and eye protection.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace

P314 - Get medical advice/attention if you feel unwell

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs, get medical attention

P362 - Take off contaminated clothing and wash before reuse.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists, get medical attention.

P405 - Store locked up

P501 - Dispose of contents and container in accordance with applicable local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Weight %
Iron	7439-89-6	40-70
Chromium	7440-47-3	15-30
Nickel	7440-02-0	10-30
Titanium dioxide	13463-67-7	7-13
Molybdenum	7439-98-7	1-5
Feldspar	68476-25-5	1-5
Manganese	7439-96-5	1-5
Potassium silicate	1312-76-1	1-5
Chromium Oxide	1308-38-9	1-5
Calcium Fluoride	14542-23-5	1-5
Calcium carbonate	1317-65-3	1-5
Bentonite	1302-78-9	1-5
Silicon	7440-21-3	.1-1

*The exact percentage (concentration) of composition has been withheld as a trade secret

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 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 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** No data 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, NOHSC (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.

Environmental Precautions Prevent product from contaminating soil or from entering sewage, drainage systems, and bodies of water.

Methods for Containment Pick up and arrange disposal without creating dust.

Methods for Cleaning Up Shovel or vacuum any spilled material into a suitable container. Alloy wastes are normally collected to recover metal value.

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing.

Storage Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

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	250 mg/m ³ TWA: 0.5 mg/m ³

Nickel	TWA: 1.5 mg/m ³	TWA: 1 mg/m ³	10 mg/m ³ TWA: 0.015 mg/m ³
Titanium dioxide	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust	5000 mg/m ³
Molybdenum	TWA: 10 mg/m ³ inhalable fraction TWA: 3 mg/m ³ respirable fraction	No data available	5000 mg/m ³
Manganese	TWA: 0.02 mg/m ³ respirable fraction TWA: 0.1 mg/m ³ inhalable fraction TWA: 0.02 mg/m ³ TWA: 0.1 mg/m ³	Ceiling: 5 mg/m ³	500 mg/m ³ STEL 3 mg/m ³ TWA: 1 mg/m ³ fume TWA: 1 mg/m ³
Chromium Oxide	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³
Calcium carbonate	No data available	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust
Bentonite	TWA: 1 mg/m ³ respirable fraction	No data available	No data available
Silicon	No data available	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust

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.

Skin Protection Welder's leather gloves, Wear fire/flamm resistant/retardant clothing.
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	Light Straw	Odor	Odorless
Odor Threshold	Not applicable	Appearance	Textured black paste
pH	Not applicable	Specific Gravity	8
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	No data available
Flammability (solid, gas)	No data available	Method	No data available
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 Hazardous polymerization does not occur.
Conditions to Avoid Exposure to air or moisture over prolonged periods.
Incompatible Products Incompatible with oxidizing agents, Strong acids.
Decomposition Temperature No data available
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 No information available.

The following values are calculated based on chapter 3.1 of the GHS document

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 Skin contact.

Acute Effects:

Eyes Causes eye irritation. Welding arc may damage eyes.
Skin May cause skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
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. May be harmful if swallowed.

Ingestion
Chronic Toxicity

May be harmful by inhalation (after often repeated exposure). Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. 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. 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. 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. Inhalation of chromium as 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 as chromium (III) and (VI) compounds are considered by OSHA, IARC, NTP and ACGIH to cause cancer.

Target Organ Effects
Aggravated Medical Conditions

Respiratory system, Central nervous system, Kidney, Blood, Liver, Lungs, Nasal Cavities.
 Pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis, Pre-existing liver and kidney diseases, Central nervous system, Allergies.

Component Information

Acute Toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50	Draize Test	Other
Iron 7439-89-6	= 984 mg/kg (Rat)	no data available	No data available	No data available	No data available
Nickel 7440-02-0	> 9000 mg/kg (Rat)	no data available	No data available	No data available	No data available
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	no data available	No data available	No data available	No data available
Potassium silicate 1312-76-1	= 1300 mg/kg (Rat)	no data available	No data available	No data available	No data available
Calcium Fluoride 14542-23-5	= 4250 mg/kg (Rat)	no data available	No data available	No data available	No data available

Calcium carbonate 1317-65-3	6450 mg/kg (Rat)	no data available	no data available	No data available	No data available
Bentonite 1302-78-9	> 5000 mg/kg (Rat)	no data available	No data available	No data available	No data available

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Chromium 7440-47-3	No data available	No data available	No data available	No data available	Skin; Eyes; Respiratory system
Nickel 7440-02-0	No data available	No data available	No data available	No data available	Lungs; Nasal Cavities; Skin
Titanium dioxide 13463-67-7	No data available	No data available	No data available	No data available	Respiratory system
Molybdenum 7439-98-7	No data available	No data available	No data available	No data available	Eyes; Respiratory system; Liver; Kidney
Manganese 7439-96-5	No data available	No data available	No data available	No data available	Blood; Central nervous system; Respiratory system; Kidney
Chromium Oxide 1308-38-9	No data available	No data available	No data available	No data available	Skin; Eyes
Calcium carbonate 1317-65-3	No data available	No data available	No data available	No data available	Skin; Eyes; Respiratory system
Silicon 7440-21-3	No data available	No data available	No data available	No data available	Skin; Eyes; Respiratory system

Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Chromium 7440-47-3	not applicable	Group 3	not applicable	not applicable	not applicable
Nickel 7440-02-0	not applicable	Group 2B	Known Reasonably Anticipated	X	not applicable
Titanium dioxide 13463-67-7	not applicable	Group 2B	not applicable	X	not applicable
Chromium Oxide 1308-38-9	not applicable	Group 3	not applicable	not applicable	not applicable
Calcium Fluoride 14542-23-5	not applicable	Group 3	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Crustacea	Partition coefficient
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 information available	100: 48 h Daphnia magna mg/L EC50 1: 48 h Daphnia magna mg/L EC50 Static	N/A
Potassium silicate	No information available.	LC50 301 - 478 mg/L Lepomis macrochirus 96 h LC50 = 3185 mg/L Brachydanio rerio 96 h	No information available	No information available.	N/A
Bentonite	No information available.	LC50 = 19000 mg/L Oncorhynchus mykiss 96 h	No information available	No information 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
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:

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 None

Component	Hazardous Substances RQs	CERCLA EHS RQs
Chromium	5000 lb 10 lb	Not applicable
Nickel	100 lb	Not applicable

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Component	CAS No.	California Prop. 65
Chromium	7440-47-3	carcinogen, initial date 2/27/87, developmental female, male 12/19/08
Nickel	7440-02-0	carcinogen
Titanium dioxide	13463-67-7	carcinogen

16. OTHER INFORMATION

Prepared By	Christopher Drogin
Supersedes Date	06/04/2013
Issuing Date	02/13/2017
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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