

# Safety Data Sheet: 100XL-T TIG WIRE

Supersedes Date 01/11/2012

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## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** 100XL-T TIG WIRE  
**Recommended use** Welding Tig wire  
**Information on Manufacturer**  
X-ERGON by Partsmaster, Div of NCH Corp.  
P.O. Box 655326  
Dallas, TX 75265-5326

**Product Code** 2004100T  
**Chemical nature** Inorganic solid blend  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300  
**Telephone inquiry**  
972-579-2477

## 2. HAZARD IDENTIFICATION

**Color** White

**Physical State** Solid

**Odor** Odorless

### GHS

#### Classification

##### Physical Hazards

None

##### Health Hazard

Skin Corrosion/Irritation

Skin Sensitization

Carcinogenicity

Specific target organ systemic toxicity (repeated exposure)

##### Other hazards

None

Category 3

Category 1

Category 2

Category 1

### Labeling

#### Signal Word

**DANGER**



#### Hazard Statements

H351 - Suspected of causing cancer

H372 - Causes damage to organs through prolonged or repeated exposure

H316 - Causes mild skin irritation

H317 - May cause an allergic skin reaction

#### Precautionary Statements

P202 - Do not handle until all safety precautions have been read and understood

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

P270 - Do not eat, drink or smoke when using this product

P260 - Do not breathe dust or fume.

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

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

P308 + P313 - IF exposed or concerned: Get medical attention/advice

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

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

P273 - Avoid release to the environment

P405 - Store locked up

P501 - Dispose of contents and container to an approved waste disposal plant.

45 % of the mixture consists of ingredient(s) of unknown toxicity

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Iron oxide	1309-37-1	30-60
Chromium	7440-47-3	15-40
Nickel	7440-02-0	7-13
Manganese	7439-96-5	1-5
Molybdenum	7439-98-7	.5-1.5
Copper	7440-50-8	.5-1.5
Silicon	7440-21-3	.5-1.5

## 4. FIRST AID MEASURES

<b>General advice</b>	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin Contact</b>	In case of contact, immediately flush skin with soap and plenty of water. If skin irritation persists, call a physician.
<b>Inhalation</b>	Remove person to fresh air. If signs/symptoms continue, get medical attention.
<b>Ingestion</b>	If swallowed, do not induce vomiting - seek medical advice. Never give anything by mouth to an unconscious person.
<b>Notes to physician</b>	Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	The product is not flammable	<b>Method</b>	Not applicable
<b>Upper</b>	No data available	<b>Lower</b>	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.

<b>NFPA</b>	<b>Health 2</b>	<b>Flammability 0</b>	<b>Instability 0</b>
<b>HMIS</b>	<b>Health 2</b>	<b>Flammability 0</b>	<b>Instability 0</b>

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	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.
<b>Environmental Precautions</b>	Prevent product from contaminating soil or from entering sewage, drainage systems, and bodies of water .
<b>Methods for Containment</b>	Pick up and arrange disposal without creating dust.
<b>Methods for Cleaning Up</b>	Shovel or vacuum any spilled material into a suitable container. Alloy wastes are normally collected to recover metal value .
<b>Neutralizing Agent</b>	Not applicable.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Do not eat, drink or smoke when using this product.
<b>Storage</b>	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.
<b>Storage Temperature</b>	<b>Minimum</b> No information available <b>Maximum</b> No information available
<b>Storage Conditions</b>	<b>Indoor</b> X <b>Outdoor</b> <b>Heated</b> <b>Refrigerated</b>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH
Iron oxide	TWA: 5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	IDLH: 2500 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>
Chromium	TWA: 0.5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	IDLH: 250 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>
Nickel	TWA: 1.5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> TWA: 0.015 mg/m <sup>3</sup>
Manganese	TWA: 0.02 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	Ceiling: 5 mg/m <sup>3</sup>	IDLH: 500 mg/m <sup>3</sup> STEL 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
Molybdenum	TWA: 10 mg/m <sup>3</sup> TWA: 3 mg/m <sup>3</sup>	No data available	IDLH: 5000 mg/m <sup>3</sup>
Copper	TWA: 0.2 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	IDLH: 100 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>
Silicon	No data available	TWA: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>

<b>Engineering Measures</b>	Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases below the
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<b>Personal Protective Equipment</b> <b>Eye/Face Protection</b>	TLV's in the worker's breathing zone and in the general area. Train the worker to keep his head out of the fumes .
<b>Skin Protection</b> <b>Respiratory Protection</b>	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 . Welder's leather gloves, Wear fire/flamm resistant/retardant clothing. 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.
<b>General Hygiene Considerations</b>	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

<b>Physical State</b>	Solid	<b>Viscosity</b>	Not applicable
<b>Color</b>	White	<b>Odor</b>	Odorless
<b>Odor Threshold</b>	Not applicable	<b>Appearance</b>	Textured black paste
<b>pH</b>	Not applicable	<b>Specific Gravity</b>	6
<b>Evaporation Rate</b>	Not applicable	<b>Percent Volatile (Volume)</b>	No information available
<b>VOC Content (%)</b>	No information available	<b>Vapor Pressure</b>	Not applicable
<b>Vapor Density</b>	Not applicable	<b>Solubility</b>	Insoluble
<b>n-Octanol/Water Partition</b>	No data available	<b>Melting Point/Range</b>	1500 - 2000 °F / 816 - 1093 °C
<b>Decomposition Temperature</b>	No data available	<b>Boiling Point/Range</b>	4980 °F / 2749 °C
<b>Flammability (solid, gas)</b>	No data available	<b>Method</b>	Not applicable
<b>Flash Point</b>	The product is not flammable		
<b>Autoignition Temperature</b>	No information available.		
<b>Upper</b> No data available <b>Lower</b> No data available			

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions. Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	None known
<b>Incompatible Products</b>	Incompatible with oxidizing agents, Strong acids.
<b>Hazardous Decomposition Products</b>	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
<b>Possibility of Hazardous Reactions</b>	None under normal processing

## 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

<b>Dermal LD50</b>	No information available
<b>Inhalation LC50</b>	
<b>Gas</b>	No information available
<b>Mist</b>	No information available
<b>Vapor</b>	No information available

<b>Principle Route of Exposure</b>	Inhalation, Ingestion.
<b>Primary Routes of Entry</b>	Inhalation

**Acute Effects****Eyes**

Causes eye irritation. Welding arc may damage eyes .

**Skin**

Causes 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 . Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Ingestion****Chronic Toxicity**

Prolonged exposure may cause chronic effects. Harmful if inhaled and may cause delayed lung injury. 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 . 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 . 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 . Fume may cause Wilson's disease in some individuals with a rare inherited metabolic disorder characterized by retention of copper in the liver, brain, kidney and corneas. Wilson's disease, if untreated can result in liver failure . Inhalation of Molybdenum fumes has caused kidney damage, respiratory irritation and liver damage in animals .

**Target Organ Effects**

Respiratory system, Central nervous system, Kidney, Blood, Liver, Lungs, Nasal Cavities.

**Aggravated Medical Conditions**

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	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Iron oxide	> 10000 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
Nickel	> 9000 mg/kg ( Rat )	no data available	no data available	no data available	no data available
Manganese	no data available	no data available	no data available	no data available	no data available
Molybdenum	no data available	no data available	no data available	no data available	no data available
Copper	no data available	no data available	no data available	no data available	no data available
Silicon	no data available	no data available	no data available	no data available	no data available

**Chronic Toxicity**

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Iron oxide	no data available	no data available	no data available	no data available	respiratory system eyes, respiratory system, skin
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
Molybdenum	no data available	no data available	no data available	no data available	eyes, respiratory system, liver, kidneys
Copper	no data available	no data available	no data available	no data available	eyes, kidneys, liver, respiratory system, skin
Silicon	no data available	no data available	no data available	no data available	eyes, respiratory

system,skin

**Carcinogenicity**

Component	ACGIH	IARC	NTP	OSHA	Other
Iron oxide	not applicable	not applicable	not applicable	not applicable	not applicable
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
Molybdenum	not applicable	not applicable	not applicable	not applicable	not applicable
Copper	not applicable	not applicable	not applicable	not applicable	not applicable
Silicon	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 oxide	no data available	no data available	no data available	no data available	N/A
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
Molybdenum	no data available	no data available	no data available	no data available	N/A
Copper	EC50 0.0426 - 0.0535 mg/L Pseudokirchneriella subcapitata 72 h EC50 0.031 - 0.054 mg/L Pseudokirchneriella subcapitata 96 h	LC50 0.0068 - 0.0156 mg/L Pimephales promelas 96 h LC50 < 0.3 mg/L Pimephales promelas 96 h LC50 = 0.2 mg/L Pimephales promelas 96 h LC50 = 0.052 mg/L Oncorhynchus mykiss 96 h LC50 = 1.25 mg/L Lepomis macrochirus 96 h LC50 = 0.3 mg/L Cyprinus carpio 96 h LC50 = 0.8 mg/L Cyprinus carpio 96 h LC50 = 0.112 mg/L Poecilia reticulata 96 h	no data available	EC50 = 0.03 mg/L 48 h	N/A
Silicon	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

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	15-40	1.0
Nickel	7440-02-0	7-13	0.1
Manganese	7439-96-5	1-5	1.0
Copper	7440-50-8	.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
Iron oxide	Not applicable	Not applicable
Chromium	5000 lb	Not applicable
Nickel	100 lb	Not applicable
Manganese	Not applicable	Not applicable
Molybdenum	Not applicable	Not applicable
Copper	5000 lb	Not applicable
Silicon	Not applicable	Not applicable

## 16. OTHER INFORMATION

Prepared By

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Reason for Revision

No information available.

Glossary

No information available.

List of References.

No information available.

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