# Safety Data Sheet: DURA-WELD GOLD ELECTRODE

**Supercedes Date** 05/31/2011 **Issuing Date** 06/03/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** DURA-WELD GOLD 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** 10620001
**Chemical nature** Inorganic solid blend
**Emergency Telephone Number**
CHEMTREC® 800-424-9300
**Telephone inquiry**
972-579-2477

## 2. HAZARD IDENTIFICATION

**Color** Gold **Physical State** Solid **Odor** Odorless

**GHS Classification**

*Physical Hazards*
None

*Health Hazard*

| | |
|---|---|
| Acute Oral Toxicity | Category 4 |
| Acute Aquatic Toxicity | Category 1 |
| Chronic Aquatic Toxicity | Category 1 |

*Other hazards*
None

**Labeling**
*Signal Word*
**WARNING**

*Hazard Statements*
H302 - Harmful if swallowed
H410 - Very toxic to aquatic life with long lasting effects

*Precautionary Statements*
P270 - Do not eat, drink or smoke when using this product
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P301+ P312 - IF SWALLOWED: Call a physician if unwell
P330 - Rinse mouth
P501 - Dispose of contents and container to an approved waste disposal plant.
P273 - Avoid release to the environment

5 % of the mixture consists of ingredient(s) of unknown toxicity

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight % |
|---|---|---|
| Iron | 7439-89-6 | 60-100 |
| Titanium dioxide | 13463-67-7 | 5-15 |
| Silicon dioxide - hydrated | 7631-86-9 | 1-5 |
| Cellulose | 9004-34-6 | 1-5 |
| Feldspar | 68476-25-5 | 1-5 |
| Manganese | 7439-96-5 | 1-5 |
| Potassium silicate | 1312-76-1 | 1-10 |

## 4. FIRST AID MEASURES

**General advice** If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
**Eye Contact** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, consult a specialist .
**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. Rinse mouth.
**Notes to physician** Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

**Flash Point** Not applicable **Method** Not applicable
**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** 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** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Clean contaminated surface thoroughly. Shovel into suitable container for disposal. Take up mechanically and collect in suitable container for disposal.
**Neutralizing Agent** Not applicable.

## 7. HANDLING AND STORAGE

**Handling** Do not eat, drink or smoke when using this product. Ensure adequate ventilation.
**Storage** 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 |
|---|---|---|---|
| Iron | No data available | No data available | No data available |
| Titanium dioxide | TWA: 10 mg/m$^3$ | TWA: 15 mg/m$^3$ | IDLH: 5000 mg/m$^3$ |
| Silicon dioxide - hydrated | No data available | No data available | IDLH: 3000 mg/m$^3$<br>TWA: 6 mg/m$^3$ |
| Cellulose | : 10 mg/m$^3$ TWA | : 15 mg/m$^3$ TWA (total dust); 5 mg/m$^3$ TWA (respirable fraction) | TWA: 10 mg/m$^3$ TWA: 5 mg/m$^3$ |
| Feldspar | No data available | No data available | No data available |
| Manganese | TWA: 0.2 mg/m$^3$ | Ceiling: 5 mg/m$^3$ | IDLH: 500 mg/m$^3$<br>STEL 3 mg/m$^3$<br>TWA: 1 mg/m$^3$ |
| Potassium silicate | 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** Welder's leather gloves, Wear fire/flame 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Physical State** | Solid | **Viscosity** | Not applicable |
| **Color** | Gold | **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** | 1830 - 2730 °F / 999 - 1499 °C |
| **Decomposition Temperature** | No data available | **Boiling Point/Range** | 5500 °F / 3038 °C |
| **Flammability (solid, gas)** | No data available | | |
| **Flash Point** | Not applicable | **Method** | Not applicable |
| **Autoignition Temperature** | No data available | | |

**Upper** No data available **Lower** No data available

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **Chemical Stability** | Stable under normal conditions |
| **Conditions to Avoid** | None known |
| **Incompatible Products** | Strong acids, 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** | 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** | 1,246.76 |
| **Dermal LD50** | 2,001.00 |
| **Inhalation LC50** | |
| **Gas** | No information available |
| **Mist** | 11.60 |
| **Vapor** | 3.19 |
| **Principle Route of Exposure** | Inhalation |
| **Primary Routes of Entry** | Inhalation |
| **Acute Effects** | |
| **Eyes** | Causes eye irritation. |
| **Skin** | Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. |
| **Inhalation** | May cause irritation of respiratory tract. |
| **Ingestion** | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea |
| **Chronic Toxicity** | Prolonged exposure may cause chronic effects. 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 . Prolonged |

exposure to elevated noise levels during operations may affect hearing .

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

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

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 |
| Titanium dioxide | > 10000 mg/kg ( Rat ) | no data available | no data available | no data available | no data available |
| Silicon dioxide - hydrated | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | > 2.2 mg/L ( Rat ) 1 h | no data available | no data available |
| Cellulose | > 5 g/kg ( Rat ) | > 2 g/kg ( Rabbit ) | > 5800 mg/m$^3$ ( Rat ) 4 h | no data available | no data available |
| Feldspar | no data available | 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 |
| Potassium silicate | = 1300 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 |
|---|---|---|---|---|---|
| Iron | no data available | no data available | no data available | no data available | no data available |
| Titanium dioxide | no data available | no data available | no data available | no data available | respiratory system |
| Silicon dioxide - hydrated | no data available | no data available | no data available | no data available | eyes, respiratory system |
| Cellulose | 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 |
| Manganese | no data available | no data available | no data available | no data available | CNS,respiratory system,blood,kidneys |
| Potassium silicate | no data available | no data available | no data available | no data available | no data available |

**Carcinogenicity**

| Component | ACGIH | IARC | NTP | OSHA | Other |
|---|---|---|---|---|---|
| Iron | not applicable | not applicable | not applicable | not applicable | not applicable |
| Titanium dioxide | A4 | Group 2B | not applicable | X | not applicable |
| Silicon dioxide - hydrated | not applicable | not applicable | not applicable | not applicable | not applicable |
| Cellulose | not applicable | not applicable | not applicable | not applicable | not applicable |
| Feldspar | not applicable | Group 2B | not applicable | not applicable | not applicable |
| Manganese | not applicable | not applicable | not applicable | not applicable | not applicable |
| Potassium silicate | 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 Morone saxatilis 96 h<br>LC50 = 0.56 mg/L Cyprinus carpio 96 h | no data available | no data available | N/A |
| Titanium dioxide | no data available | no data available | no data available | no data available | N/A |
| Silicon dioxide - hydrated | EC50 = 440 mg/L Pseudokirchneriella subcapitata 72 h | LC50 = 5000 mg/L Brachydanio rerio 96 h | no data available | EC50= 7600 mg/L 48 h | N/A |
| Cellulose | 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 |
| Manganese | no data available | no data available | no data available | no data available | N/A |
| Potassium silicate | no data available | LC50 301 - 478 mg/L Lepomis macrochirus 96 h<br>LC50 = 3185 mg/L Brachydanio rerio 96 h | no data available | EC50= 216 mg/L 96 h | 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 |
|---|---|---|---|
| Feldspar | 68476-25-5 | 1-5 | 1.0 |
| Manganese | 7439-96-5 | 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 | Not applicable | Not applicable |
| Titanium dioxide | Not applicable | Not applicable |
| Silicon dioxide - hydrated | Not applicable | Not applicable |
| Cellulose | Not applicable | Not applicable |
| Feldspar | Not applicable | Not applicable |
| Manganese | Not applicable | Not applicable |
| Potassium silicate | Not applicable | Not applicable |

## 16. OTHER INFORMATION

**Prepared By** Christopher Drogin
**Supercedes Date** 05/31/2011
**Issuing Date** 06/03/2013
**Reason for Revision** No information available.
**Glossary** No information available.
**List of References.** No information available.

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