MATERIAL SAFETY DATA SHEET

Product Identification (Label Name): SURWELD NI™

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>%</th>
<th>Expose Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASE METAL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>7439896</td>
<td>99 max</td>
<td>as Oxide Fume 5</td>
</tr>
<tr>
<td>Plasticized Vinyl</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alloying Elements:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon</td>
<td>7440440</td>
<td>.08 - 0.18</td>
<td>--</td>
</tr>
<tr>
<td>Manganese</td>
<td>7439965</td>
<td>.30 - .60 (dust)</td>
<td>5</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>7723140</td>
<td>.015 - .035 (yellow)</td>
<td>.1</td>
</tr>
<tr>
<td>Sulfur</td>
<td>7704349</td>
<td>.02 max</td>
<td>as Sulfur Dioxide 5.2</td>
</tr>
<tr>
<td>Silicon</td>
<td>7440213</td>
<td>.02 max (dust)</td>
<td>10</td>
</tr>
<tr>
<td>Aluminum</td>
<td>7429905</td>
<td>.02 - .07 (dust)</td>
<td>10</td>
</tr>
<tr>
<td>Copper</td>
<td>7440508</td>
<td>.10 max (dust)</td>
<td>1</td>
</tr>
<tr>
<td>Chromium</td>
<td>7440473</td>
<td>.05 max</td>
<td>.5</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>7439987</td>
<td>.05 max</td>
<td>10</td>
</tr>
</tbody>
</table>

Section 313 Supplier Information
THIS PRODUCT DOES NOT CONTAIN TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372

NFPA Health = 1 Fire = 0 Reactivity = 0

2. Physical Data
Boiling Point: N/A Specify Gravity (H₂O = 1): N/A
Vapor Pressure (mm Hg): N/A Melting Point: N/A
Vapor Density (Air = 1): N/A Evaporation Rate (Butyl Acetate = 1): N/A
Solubility in Water: Insoluble Appearance and Odor: Welding Electrode - No Noticeable Odor

3. Health Hazard Data
Primary Route(s) of Entry: (In the Form of Dust and/or Fumes Only)
Inhalation? Yes Skin? No Ingestion? No
*UV Exposure
Carcinogenicity: NIF NTP? IARC? OSHA Regulated
**Acute Effects of Overexposure:**

**EYES:** Local Irritation

**SKIN:** Local Irritation

**INHALATION:** Excessive exposure to fume may cause a sweet or metallic taste in the mouth, immediate dryness and irritation of the throat, tightness of the chest, and coughing. Several hours later, symptoms may progress to fever, malaise, perspiration, frontal headache, muscle cramps, low back pain, occasionally blurred vision, nausea, and vomiting. Pulmonary congestion, shortness of breath and symptoms of oxygen deficiency may also develop.

**INGESTION:** Nausea, Vomiting, and Purging

**EXPOSURE TO UV:** Exposure to UV Radiation can result in keratoconjunctivitis, also known as welders flash. Symptoms include inflammation, blurred vision, and headache.

**Chronic Effects of Exposure:**

**SKIN:** NO

**INHALATION:** Electrodes designed for welding underwater with fresh air supplied to diver. Welding above water may cause a sweet or metallic taste in the mouth. Do not use this electrode above water.

**Toxicity Data:**

Job task data extrapolated over an eight hour TWA. Conditions for worst case scenario.

- Mild irritation: 300 ug/3 days. Intermittent skin contact
- Lowest toxic concentration: 124 mg/m$^3$, 50 minute inhalation

**Medical Conditions Aggravated by Exposure:**

Respiratory illness/diseases, neurological and skin disorders/diseases.

**Emergency and First Aid Procedures:**

**EYE CONTACT:** Flush with running water, including under the eyelids, for about 15 minutes. If irritation persists, seek medical attention.

**SKIN CONTACT:** Wet Welding Electrode intended for underwater use only. Skin contact not applicable

**INHALATION:** Wet welding electrode intended for underwater welding only. Exposure above water, remove victim from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. Keep the affected person warm and at rest. Seek medical attention immediately.

**INGESTION:** If victim is conscious dilute the stomach and induce vomiting. Qualified medical personnel should remove remaining chemicals by gastric lavage. Seek medical attention immediately.

**4. Fire and Explosion Hazard Data**

**Flash Point (Method Used):** NONE

**Flammable Limits:** N/A

**Extinguishing MEDIA:** N/A

**Special Fire Fighting Procedures:** N/A

**Unusual Fire and Explosion Hazards:** Oil and grease on torches can cause a violent reaction in the presence of oxygen.

**5. Reactivity Data**

**Stability:**

<table>
<thead>
<tr>
<th></th>
<th>Unstable</th>
<th>Stable</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
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</tr>
</tbody>
</table>

**Conditions to Avoid:** Allowing gases to be trapped in a confined area.

**Incompatibility (Materials to Avoid):** Oil and grease on torch can cause a violent reaction in the presence of unburned oxygen.

**Hazardous Decomposition or By-Products**

**Hazardous Polymerization:**

<table>
<thead>
<tr>
<th></th>
<th>Will Occur</th>
<th>Will Not Occur</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
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</tbody>
</table>
6. Spill or Leak Procedures
Steps to be Taken in Case Material is Released or Spilled: N/A

Waste Disposal Method: Comply with all local, state, and federal regulations for proper disposal.

7. Special Protection Information
Respiratory Protection: Air purifying respirator if area is unventilated and local exhaust not available.

Ventilation: Diving Helmet with supplied air

Protective Gloves: Rubber Gloves to prevent electrical shock

Eye Protection: 8 - 10 minimum welding shield

Other Protective Equipment: Commercial diving equipment with communications

8. Special Precautions
Precautions to be Taken in Handling and Storing: N/A

Other Precautions: Properly ground welding equipment

9. Other Information
Use proper procedure at all times as specified by the following:
2. OSHA 1910 Subpart Q, Cutting and Welding Regulations
3. ANSI Z49.1 Safety in Welding and Cutting
4. Other applicable references ADC Consensus Standards
5. U.S. Navy Welding and Burning Manual

ABBREVIATIONS
NA - Not Applicable
NL - Not Listed
NE - Not Established
NIF - No Information Found