SECTION 1: IDENTIFICATION
1.1. Product Identifier
Product Form: Mixture
Product Name: SS-7 EWI Deep TIG

1.2. Intended Use of the Product
Use of the substance/mixture: Penetration Enhancing Compound for GTA Welding of Carbon Steel Alloys. For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party
Company
EWI
1250 Arthur E. Adams Drive
Columbus, OH 43221
614-688-5000
www.ewi.org

1.4. Emergency Telephone Number
Emergency Number: 614-688-5000 8am - 4pm EST M-F

SECTION 2: HAZARDS IDENTIFICATION
2.1. Classification of the Substance or Mixture
Classification (GHS-US)
Acute Tox. 3 (Oral) H301
Acute Tox. 4 (Inhalation:dust,mist) H332
Resp. Sens. 1 H334
Skin Sens. 1 H317
Carc. 1A H350

2.2. Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US):

Signal Word (GHS-US): Danger
Hazard Statements (GHS-US):
H301 - Toxic if swallowed.
H317 - May cause an allergic skin reaction.
H332 - Harmful if inhaled.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350 - May cause cancer.

Precautionary Statements (GHS-US):
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust, fume.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective clothing, protective gloves, eye protection, face protection.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTER/doctor if you feel unwell.
P321 - Specific treatment (see Section 4).
P330 - Rinse mouth.
P332+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a poison center/doctor/...
2.3. Other Hazards
Inhalation of dusts and fumes can cause metal fume fever. Symptoms can include a metallic or sweet taste in the mouth, sweating, shivering, headache, throat irritation, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, fatigue, and shortness of breath.

2.4. Unknown Acute Toxicity (GHS-US) No data available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance
Not applicable

#### 3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium oxide (TiO)</td>
<td>(CAS No) 12137-20-1</td>
<td>20 - 60</td>
<td>Not classified</td>
</tr>
<tr>
<td>Chromium oxide (Cr₂O₃)</td>
<td>(CAS No) 1308-38-9</td>
<td>0 - 50</td>
<td>Acute Tox. 3 (Oral), H301</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (Inhalation: dust, mist), H332</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Resp. Sens. 1, H334</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carc. 1A, H350</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystalline-free</td>
<td>(CAS No) 112945-52-5</td>
<td>0 - 20</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

### SECTION 4: FIRST AID MEASURES

#### 4.1. Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

**First-aid Measures After Inhalation:** When symptoms occur: go into open air and ventilate suspected area. If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If exposed or concerned: Get medical advice/attention.

**First-aid Measures After Skin Contact:** Gently wash with plenty of soap and water. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**First-aid Measures After Ingestion:** Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.

#### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms/Injuries:** Toxic if swallowed. May cause an allergic skin reaction. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer.

**Symptoms/Injuries After Inhalation:** Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. During welding, the most significant route of exposure is by the inhalation (breathing) of welding fumes. If welding fumes are inhaled, they can cause a condition commonly known as metal fume fever with symptoms which resemble influenza. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur.

**Symptoms/Injuries After Skin Contact:** May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** May cause eye irritation.

**Symptoms/Injuries After Ingestion:** Toxic if swallowed.

**Chronic Symptoms:** May cause cancer.

#### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
If you feel unwell, seek medical advice (show the label where possible).

### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Use of heavy stream of water may spread fire.

#### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.
SS-7 EWI Deep TIG
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5.3. Advice for Firefighters
Firefighting Instructions: Exercise caution when fighting any chemical fire. Do not breathe fumes or vapors from fire.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Avoid all unnecessary exposure. Do not breathe dust or fumes.
6.1.1. For Non-emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).
6.1.2. For Emergency Responders
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area.
6.2. Environmental Precautions
Prevent entry to sewers and public waters.
6.3. Methods and Material for Containment and Cleaning Up
6.4. Reference to Other Sections See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Additional Hazards When Processed: Fumes from welding, or processing of this material can be harmful if inhaled. Risk of electric shock when welding. Arc rays and sparks can burn skin. This product is intended for use in ARC welding. During this process UV rays irritate the superficial corneal epithelium, causing inhibition of mitosis, production of nuclear fragmentation, and loosening of the epithelial layer. Under experimental conditions in animals, phototoxic effects have been demonstrated at all levels of the cornea, including the stroma and endothelium.
Precautions for Safe Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust or fumes.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do no eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
7.2. Conditions for Safe Storage, Including Any Incompatibilities
Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.
Incompatible Products: Strong oxidizers.
Storage Area: Store locked up.
7.3. Specific End Use(s) Penetration Enhancing Compound for GTA Welding of Carbon Steel Alloys. For professional use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

<table>
<thead>
<tr>
<th>Material</th>
<th>USA OSHA OSHA PEL (TWA) (mg/m³)</th>
<th>USA OSHA ACGIH TWA (mg/m³)</th>
<th>USA ACGIH ACGIH TWA (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, fumed, crystalline-free (112945-52-5)</td>
<td>5 mg/m³ (respirable)</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Chromium oxide (Cr₂O₃) (1308-38-9)</td>
<td>0.05 mg/m³ (Cr II &amp; Cr III Compounds) 0.05 (Cr VI Water Soluble)</td>
<td>1 mg/m³ (metal) (Cr II &amp; Cr III Compounds) 0.005 (Cr VI Compounds)</td>
<td></td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystalline-free (112945-52-5)</td>
<td>5 mg/m³ (respirable)</td>
<td>10 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure Controls
Appropriate Engineering Controls: Local exhaust and general ventilation must be adequate to meet exposure standards. Site-specific risk assessments should be conducted to determine the appropriate exposure control measures. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Ensure all national/local regulations are observed.

Materials for Protective Clothing: Wear fire/flame resistant/retardant clothing.
Hand Protection: Wear chemically resistant protective gloves.
Eye Protection: Wear goggles with suitable filter lenses when use is cutting/welding.
Skin and Body Protection: Use of protective coveralls and long sleeves is recommended.
Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.
Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties
- Physical State: Solid
- Appearance: Green Powder
- Odor: Odorless
- Odor Threshold: No data available
- pH: No data available
- Evaporation Rate: No data available
- Melting Point: No data available
- Freezing Point: No data available
- Boiling Point: No data available
- Auto-ignition Temperature: No data available
- Decomposition Temperature: No data available
- Flammability (solid, gas): No data available
- Vapor Pressure: No data available
- Relative Vapor Density at 20 °C: No data available
- Relative Density: No data available
- Solubility: Insoluble in water
- Partition Coefficient: N-octanol/water: No data available
- Viscosity: No data available

9.2. Other Information: No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.
10.2. Chemical Stability: The product is stable at normal handling and storage conditions.
10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
10.4. Conditions to Avoid: No specific data.
10.5. Incompatible Materials: Strong oxidizers.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects
Acute Toxicity: Toxic if swallowed. Harmful if inhaled.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Oral</th>
<th>Dust/Mist</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS-7 EWI Deep TIG</td>
<td>100.00 mg/kg body weight</td>
<td>1.50 mg/l/4h</td>
</tr>
<tr>
<td>ATE (Dust/Mist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystalline-free (112945-52-5)</td>
<td>5000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LD50 Oral Rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium oxide (Cr₂O₃) (1308-38-9)</td>
<td>100.00 mg/kg body weight</td>
<td>1.50 mg/l/4h</td>
</tr>
<tr>
<td>ATE (Oral)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE (Dust/Mist)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Irritation: Not classified
Respiratory or Skin Sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: May cause cancer.

Silica, amorphous, fumed, crystalline-free (112945-52-5)

| IARC group | 3 |

Chromium oxide (Cr$_2$O$_3$) (1308-38-9)

| IARC group | 3 |

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. During welding, the most significant route of exposure is by the inhalation (breathing) of welding fumes. If welding fumes are inhaled, they can cause a condition commonly known as metal fume fever with symptoms which resemble influenza. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur.

Symptoms/Injuries After Skin Contact: May cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: May cause eye irritation.

Symptoms/Injuries After Ingestion: Toxic if swallowed.

Chronic Symptoms: May cause cancer.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity Not classified

12.2. Persistence and Degradability Not established

12.3. Bioaccumulative Potential Not established

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.


SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

SS-7 EWI Deep TIG

SARA Section 311/312 Hazard Classes Immediate (acute) health hazard

Delayed (chronic) health hazard

Chromium oxide (Cr$_2$O$_3$) (1308-38-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Titanium oxide (TiO) (12137-20-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations

Chromium oxide (Cr$_2$O$_3$) (1308-38-9)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date: 10/13/2014
SS-7 EWI Deep TIG
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Acute Tox. 3 (Oral)</th>
<th>Acute toxicity (oral) Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Inhalation:dust,mist)</td>
<td>Acute toxicity (inhalation:dust,mist) Category 4</td>
</tr>
<tr>
<td>Carc. 1A</td>
<td>Carcinogenicity Category 1A</td>
</tr>
<tr>
<td>Resp. Sens. 1</td>
<td>Respiratory sensitisation Category 1</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Skin sensitization Category 1</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H334</td>
<td>May cause allergy or asthma symptoms or breathing difficulties if inhaled</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)