

**SECTION 1: IDENTIFICATION**

**1.1. Product Identifier**

**Product Form:** Mixture

**Product Name:** Ni-139 EWI Deep TIG

**1.2. Intended Use of the Product**

**Use of the substance/mixture:** Penetration Enhancing Compound for GTA Welding of Nickel 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](http://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)**

Skin Sens. 1	H317
Carc. 1A	H350
STOT RE 1	H372
Aquatic Chronic 4	H413

**2.2. Label Elements**

**GHS-US Labeling**

**Hazard Pictograms (GHS-US)**



**Signal Word (GHS-US)**

: Danger

**Hazard Statements (GHS-US)**

: H317 - May cause an allergic skin reaction.  
H350 - May cause cancer.  
H372 - Causes damage to organs through prolonged or repeated exposure.  
H413 - May cause long lasting harmful effects to aquatic life.

**Precautionary Statements (GHS-US)**

: P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P260 - Do not breathe fume, dust.  
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P273 - Avoid release to the environment.  
P280 - Wear protective clothing, protective gloves, eye protection, face protection.  
P302+P352 - IF ON SKIN: Wash with plenty of water.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P314 - Get medical advice/attention if you feel unwell.  
P321 - Specific treatment (see Section 4).  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P405 - Store locked up.  
P501 - Dispose of contents/container according to local, regional, national, and international regulations.

**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.

# Ni-139 EWI Deep TIG

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. **Substance** Not applicable

3.2. **Mixture**

Name	Product Identifier	%	Classification (GHS-US)
Oxides of Titanium	(CAS No) 1317-80-2, 1344-54-3, 12137-20-1	0 - 60	Carc. 2, H351
Nickel oxide (NiO)	(CAS No) 1313-99-1	0 - 40	Skin Sens. 1, H317 Carc. 1A, H350 STOT RE 1, H372 Aquatic Chronic 4, H413
Manganese silicide (MnSi <sub>2</sub> )	(CAS No) 12032-86-9	0 - 10	STOT SE 3, H335 STOT RE 2, H373

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. When symptoms occur: go into open air and ventilate suspected area. If exposed or concerned: Get medical advice/attention.

**First-aid Measures After Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash with plenty of soap and water. Get medical advice/attention. 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.

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

**Symptoms/Injuries:** Causes damage to organs through prolonged or repeated exposure. May cause cancer. May cause an allergic skin reaction.

**Symptoms/Injuries After Inhalation:** May cause cancer by inhalation. 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:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** Causes damage to organs through prolonged or repeated exposure. 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.

#### 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).

# Ni-139 EWI Deep TIG

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Emergency Procedures:** Evacuate unnecessary personnel.

## 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

**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely. Keep in suitable, closed containers for disposal. Avoid generation of dust during clean-up of spills.

## 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 not 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 Nickel Alloys. For professional use only.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

Oxides of Titanium		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (respirable)
Manganese silicide (MnSi <sub>2</sub> ) (12032-86-9)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (as Mn)
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (ceiling)
Nickel oxide (NiO) (1313-99-1)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (soluble Ni compounds) 0.2 (insoluble Ni compounds)
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (as Ni)

### 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.

#### Personal Protective Equipment

: Protective clothing. Gloves. Face shield. Insufficient ventilation: wear respiratory protection.



#### Materials for Protective Clothing

: Wear fire/flammable resistant/retardant clothing.

#### Hand Protection

: Wear chemically resistant protective gloves.

# Ni-139 EWI Deep TIG

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Eye Protection</b>	: Wear goggles with suitable filter lenses when use is cutting/welding.
<b>Skin and Body Protection</b>	: Use of protective coveralls and long sleeves is recommended.
<b>Respiratory Protection</b>	: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.
<b>Other Information</b>	: When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

<b>Physical State</b>	: Solid
<b>Appearance</b>	: Grey powder
<b>Odor</b>	: Odorless
<b>Odor Threshold</b>	: No data available
<b>pH</b>	: No data available
<b>Evaporation Rate</b>	: No data available
<b>Melting Point</b>	: No data available
<b>Freezing Point</b>	: No data available
<b>Boiling Point</b>	: No data available
<b>Flash Point</b>	: No data available
<b>Auto-ignition Temperature</b>	: No data available
<b>Decomposition Temperature</b>	: No data available
<b>Flammability (solid, gas)</b>	: No data available
<b>Vapor Pressure</b>	: No data available
<b>Relative Vapor Density at 20 °C</b>	: No data available
<b>Relative Density</b>	: No data available
<b>Solubility</b>	: Insoluble in water
<b>Partition Coefficient: N-octanol/water</b>	: No data available
<b>Viscosity</b>	: 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.
- 10.6. Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>). Metal oxides. When heated, material emits irritating and harmful fumes.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects

**Acute Toxicity:** Not classified

<b>Nickel oxide (NiO) (1313-99-1)</b>	
<b>LD50 Oral Rat</b>	> 5000 mg/kg

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** May cause cancer.

<b>Rutile (TiO<sub>2</sub>) (1317-80-2)</b>	
<b>IARC group</b>	3
<b>Nickel oxide (NiO) (1313-99-1)</b>	
<b>IARC group</b>	1
<b>National Toxicity Program (NTP) Status</b>	Evidence of Carcinogenicity.

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Causes damage to organs through prolonged or repeated exposure.

**Aspiration Hazard:** Not classified

# Ni-139 EWI Deep TIG

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Symptoms/Injuries After Inhalation:** May cause cancer by inhalation. 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:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** Causes damage to organs through prolonged or repeated exposure. May cause cancer.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General** : May cause long lasting harmful effects to aquatic life.

<b>Nickel oxide (NiO) (1313-99-1)</b>	
<b>LC50 Fish 1</b>	> 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
<b>EC50 Daphnia 1</b>	> 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)

**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.

**Ecology – Waste Materials:** Avoid release to the environment.

## 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

<b>Ni-139 EWI Deep TIG</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Delayed (chronic) health hazard
<b>Titanium oxide (TiO) (12137-20-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Titanium oxide (Ti<sub>2</sub>O<sub>3</sub>) (1344-54-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Rutile (TiO<sub>2</sub>) (1317-80-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Manganese silicide (MnSi<sub>2</sub>) (12032-86-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Nickel oxide (NiO) (1313-99-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2 US State Regulations

<b>Nickel oxide (NiO) (1313-99-1)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Rutile (TiO<sub>2</sub>) (1317-80-2)</b>	
U.S. - Pennsylvania - RTK (Right to Know) List	
<b>Nickel oxide (NiO) (1313-99-1)</b>	
U.S. - Massachusetts - Right To Know List	

# Ni-139 EWI Deep TIG

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances  
U.S. - Pennsylvania - RTK (Right to Know) List

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

**Revision Date** : 10/13/2014

**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:

Aquatic Chronic 4	Hazardous to the aquatic environment - Chronic Hazard Category 4
Carc. 1A	Carcinogenicity Category 1A
Carc. 2	Carcinogenicity Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H317	May cause an allergic skin reaction
H335	May cause respiratory irritation
H350	May cause cancer
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H413	May cause long lasting harmful effects to aquatic life

*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)