

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: CS-325 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)

Carc. 2 H351
STOT RE 2 H373

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)



Signal Word (GHS-US)

: Warning

Hazard Statements (GHS-US)

: H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.

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.
P280 - Wear protective clothing, protective gloves, eye protection, face protection.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
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.

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)
Sodium titanium oxide (Na ₂ Ti ₃ O ₇)	(CAS No) 12034-36-5	80 - 90	Not classified
Silica, amorphous, fumed, crystalline-free	(CAS No) 112945-52-5	0 - 10	Not classified
Rutile (TiO ₂)	(CAS No) 1317-80-2	0 - 10	Carc. 2, H351
Manganese silicide (MnSi ₂)	(CAS No) 12032-86-9	0 - 10	STOT SE 3, H335 STOT RE 2, H373

Full text of H-phrases: see section 16

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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.

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.

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 skin irritation.

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).

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.

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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. Arc rays and sparks can burn skin. Risk of electric shock when welding. 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 Carbon Steel Alloys

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Rutile (TiO ₂) (1317-80-2)		
USA ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ (respirable)
Manganese silicide (MnSi ₂) (12032-86-9)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³ (as Mn)
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ (ceiling)
Silica, amorphous, fumed, crystalline-free (112945-52-5)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	6 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	20 mppcf (80mg/m ³ /%SiO ₂)
Sodium titanium oxide (Na ₂ Ti ₃ O ₇) (12034-36-5)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.2 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ (ceiling)

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.

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

: Light Yellow Powder

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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
Flash 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.
- 10.6. Hazardous Decomposition Products:** Carbon oxides (CO, CO₂). Metal oxides. When heated, material emits irritating and harmful fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

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

LD50 Oral Rat	> 5000 mg/kg
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Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Suspected of causing cancer.

Rutile (TiO₂) (1317-80-2)

IARC group	3
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Silica, amorphous, fumed, crystalline-free (112945-52-5)

IARC group	3
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Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

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

Aspiration Hazard: Not classified

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 skin irritation.

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.

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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.

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

CS-325 EWI Deep TIG	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
Rutile (TiO₂) (1317-80-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Manganese silicide (MnSi₂) (12032-86-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sodium titanium oxide (Na₂Ti₃O₇) (12034-36-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2 US State Regulations

Rutile (TiO₂) (1317-80-2)
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:

Carc. 2	Carcinogenicity Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure

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)