

# SAFETY DATA SHEET

## DeepTIG™ Ni-139

DATE REVISED: November 09, 2017

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### SECTION 1 -- IDENTIFICATION

**Product Name/Part number:** DeepTIG™ Ni-139

**Recommended use:** GTA Welding Flux for Nickel Alloys

**Manufacturer:** Superior Flux & Mfg. Co.  
6615 Parkland Blvd  
Cleveland OH, 44139

**Emergency Contact:** CHEMTREC  
**Emergency Phone:** 1-800-424-9300  
**For other info:** (440) 349-3000

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### SECTION 2 – HAZARD(S) IDENTIFICATION

**Classification of the substance or mixture**

**GHS Classification in accordance with OSHA HCS (29 CFR 1910)**

Skin sensitization (Category 1) H317

Carcinogenicity (Category 1A) H350

Specific target organ toxicity, repeated exposure (Category 1) H372

Hazardous to the aquatic environment – Chronic (Category 4) H413

*See below for full text of H-Statement*

**GHS Label Elements, including precautionary statements**

**Pictogram(s):**



**Signal Word:** Danger

**Hazard Statement(s)**

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 statement(s)**

P260 Do not breathe dust or fumes.

P264 Wash exposed skin 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, and face protection

P302+P352 IF ON SKIN: Wash with plenty of water

P308+P313 If exposed or concerned: Get medical advice.

P314 Get medical advice or attention if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice or attention

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations.

**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.

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## SECTION 3 – COMPOSITION INFORMATION

Components	CAS Number	%
Titanium oxide mixture	12137-20-1, 1317-80-2, 1344-54-3	0-60
Nickel oxide	1313-99-1	0-40
Manganese silicide	12032-86-9	0-10

Unlisted percentages are non-hazardous stabilizers, and water.

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## SECTION 4 – FIRST AID MEASURES

### Description of first aid measures

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

**Inhalation:** If breathed in, move to fresh air. Ventilate suspected area. If not breathing, give artificial respiration. If exposed or concerned: Get medical advice or attention.

**Eyes:** Rinse cautiously with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing.

**Skin:** Take off contaminated clothing and shoes. Drench affected area with water for at least 15 minutes. Wash with plenty of soap and water. Get medical advice or attention. Wash contaminated clothing before reuse.

**Ingestion:** Do NOT induce vomiting. Consult a physician.

### 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.

If you feel unwell, seek medical advice (show the label where possible).

The most important known symptoms and effects are described in section 2 (labeling)

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## SECTION 5 – FIREFIGHTING MEASURES

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire. Use of heavy stream of water may spread fire.

**Special Hazards:** Product is not flammable, nor is it explosive. Hazardous reactions will not occur under normal condition.

**Special Advice for Firefighters:** Exercise caution when fighting any chemical fire. Do not breathe fumes or vapors from fire. Do not enter fire area without proper protective equipment, including respiratory protection.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal Precautions and Equipment and emergency procedures:** Avoid all unnecessary exposure. Do not breathe dust or fumes. Evacuate unnecessary personnel. Ventilate area and equip cleanup crew with proper protection.

*See section 8 for personal protection.*

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter sewers and public waters.

**In Case Material is spilled:** Clear up spills immediately and dispose of waste safely. Keep and place in suitable, closed containers for disposal according to local regulations. Avoid generation of dust during clean-up

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## SECTION 7 - HANDLING AND STORAGE

**Specific End Use(s):** Penetration enhancing compound for GTA Welding of Nickel Alloys.

*For professional use only.*

**Precautions for safe handling:** Do not handle until all safety precautions and any special instructions have been read and understood. Do not breathe dust or fumes.

**General Precautions:** 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.

**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.

*For full precaution statements see Section 2*

**Storage Requirements:** Keep container tightly closed in a dry, cool, and well-ventilated area. Keep container closed when not in use. Store locked up.

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## **SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **CONTROL PARAMETERS**

**OSHA Permissible Exposure Limit (PEL):** 1 mg/m<sup>3</sup>

**ACGIH Threshold Limit Value (TLV):** 0.2 mg/m<sup>3</sup>

**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.

**Respiratory Protection:** During instances of insufficient ventilation or whenever exposure may exceed established Occupational Exposure Limits, use a NIOSH-approved respirator or self-contained breathing apparatus.

**Protective Gloves:** Wear chemically resistant protective gloves. Use proper glove removal techniques (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good lab practices. Wash and dry hands after handling.

**Eye Protection:** Wear goggles with suitable filter lenses when use is cutting or welding.

**Body Protection:** Wear fire/flame resistant/retardant clothing. Protective coveralls and long sleeves is recommended.

Use equipment for protection tested and approved under appropriate government standards such as NIOSH (USA) or EN 166, CEN (EU)

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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## SECTION 9 - PHYSICAL AND CHEMICAL CHARACTERISTICS

Appearance	Grey Powder
Odor	None
Odor threshold	No data available
pH	Not applicable
Melting point/Freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate (Butyl Acetate = 1)	Not applicable
Flammability (Solid, gas)	No data available
Upper flammability or explosive limits	No data available
Lower flammability or explosive limits	No data available
Vapor pressure	Not applicable
Vapor density (Air = 1)	Not applicable
Relative density (Water = 1)	No data available
Solubility(ies)	Inoluble in water
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Not applicable

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## SECTION 10 - STABILITY AND REACTIVITY

**Reactivity:** Will not occur under normal conditions

**Stability:** Product is stable under recommended storage and handling conditions

**Possibility of hazardous reactions:** Hazardous polymerization will not occur

**Conditions to Avoid:** No specific data available

**Incompatibility:** Strong oxidizers

**Hazardous Decomposition Products** Carbon oxides (CO, CO<sub>2</sub>). Metal oxides. When heated, material emits irritation and harmful fumes.

*In the event of fire: See Section 5*

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## SECTION 11 - TOXICOLOGICAL INFORMATION

**Likely Route(s) of Exposure:** Inhalation, ingestion, skin and eye contact

**Acute Toxicity:** Not classified

**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:

Rutile (TiO<sub>2</sub>): IARC Group 3

Nickel oxide (NiO): IARC Group 1. NTP status: 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

**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. 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 for 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

**Toxicity** May cause long lasting harmful effects to aquatic life (NiO 1313-99-1)

**Persistence and degradability** No data available

**Bioaccumulative potential** No data available

**Mobility in soil** No data available

**Other adverse effects** Avoid release into the environment.

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## SECTION 13 - DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Product** Offer surplus and non-recyclable solutions to a licensed professional waste disposal company.

**Contaminated packaging** Dispose of as unused product.

Avoid release to the environment

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## SECTION 14- TRANSPORTATION

**D.O.T., IMDG and IATA:** Not regulated for transport

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## SECTION 15 - REGULATORY INFORMATION

**SARA 311/312 Hazards** Acute health hazard, Chronic health hazard

**Substances listed on the U.S. Toxic Substances Control Act (TSCA) inventory:**

<b>Substance</b>	<b>CAS No.</b>
Titanium oxide	12137-20-1
Titanium oxide	1344-54-3
Rutile	1317-80-2
Manganese silicide	12032-86-9
Nickel oxide	1313-99-1

**Substances listed on U.S. State Regulation lists:**

<b>List</b>	<b>Substance</b>	<b>CAS No.</b>
Massachusetts – Right to Know	Nickel oxide	1313-99-1
Pennsylvania – Right to Know (RTK) List	Rutile	1317-80-2
Pennsylvania – RTK List	Nickel oxide	1313-99-1
Pennsylvania – RTK Environmental Haz	Nickel oxide	1313-99-1
Pennsylvania – RTK Special Hazard Subs	Nickel oxide	1313-99-1
California – Proposition 65	Nickel oxide	1313-99-1

WARNING: This product contains chemicals known to the State of California to cause cancer.

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## SECTION 16 - OTHER INFORMATION

### Further information:

Judgments as to the suitability of information herein or the purchaser's purposes are necessarily the purchaser's responsibility. The above information does not represent any guarantee of the properties of the product. It is believed to be correct, but does not purport to be all inclusive and should be used only as a guide. Reasonable care has been taken in the preparation of this material, and is based on the present state of our knowledge.

Superior Flux & Mfg. Co. shall not be held liable for any damage resulting from handling or from contact with the above product. There are *NO WARRANTIES, NO REPRESENTATIONS AND NO RESPONSIBILITY AS TO THE ACCURACY OR THE SUITABILITY OF THIS INFORMATION FOR ANY PURCHASER'S USE OR FOR ANY CONSEQUENCE TO USE.*

### Reference(s):

EWI SDS

### Preparation information

Superior Flux & Mfg. Co.  
440-349-3000

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