

# Safety Data Sheet

Issue Date: 18-Sep-2007

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Version 1

## 1. IDENTIFICATION

### Product identifier

**Product Name** NiChrome Fiber

### Other means of identification

**SDS #** INTRA-009

### Recommended use of the chemical and restrictions on use

**Recommended Use** For industrial use.

### Details of the supplier of the safety data sheet

#### **Supplier Address**

IntraMicron, Inc.  
368 Industry Dr.  
Auburn, AL 36832

### Emergency telephone number

**Company Phone Number** 334-502-2973  
**Emergency Telephone** INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Metallic fiber

**Physical state** Solid

**Odor** None

### Classification

Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

### Signal Word

**Danger**

### Hazard statements

May cause an allergic skin reaction  
Suspected of causing cancer  
Causes damage to organs through prolonged or repeated exposure



### Precautionary Statements - Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wear protective gloves/protective clothing/eye protection/face protection  
Contaminated work clothing must not be allowed out of the workplace  
Do not breathe dust/fume/gas/mist/vapors/spray  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product

**Precautionary Statements - Response**

If exposed or concerned: Get medical advice/attention  
 IF ON SKIN: Wash with plenty of water and soap  
 Wash contaminated clothing before reuse  
 If skin irritation or rash occurs: Get medical advice/attention

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards**

Very toxic to aquatic life with long lasting effects

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Family** Nickel Alloy (Solid Metal).

Chemical name	CAS No	Weight-%
Nickel	7440-02-0	76-83
Chromium	7440-47-3	18-22
Iron	7439-89-6	0-4

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

**4. FIRST AID MEASURES**

**Description of first aid measures**

- General Advice** If exposed or concerned: Get medical advice/attention.
- Eye Contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
- Skin Contact** Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- Inhalation** Remove to fresh air.
- Ingestion** Clean mouth with water and drink afterwards plenty of water.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** May cause an allergic skin reaction. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure. Short term exposure to fumes / dust may produce irritation of eyes and respiratory system. Inhalation of high concentrations of freshly formed oxide fumes of iron, manganese and copper may cause metal fume fever, characterized by a metallic taste in the mouth, dryness and irritation of the throat and influenza-like symptoms. Chronic inhalation of high concentrations of iron oxide fumes or dust may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**

Water, carbon dioxide or dry chemical ('D' type Extinguisher).

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

May burn (hot) if ignited, highly dependent on fiber diameter.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Use personal protective equipment as required.

**Environmental precautions**

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up** Sweep up spills and place in a waste disposal container. Flush area with water.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on Safe Handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing and eye/face protection. Contaminated work clothing must not be allowed out of the workplace. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store locked up.

**Incompatible Materials** Strong acids.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nickel 7440-02-0	TWA: 1.5 mg/m <sup>3</sup> inhalable particulate matter	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> IDLH: 10 mg/m <sup>3</sup> Ni TWA: 0.015 mg/m <sup>3</sup> TWA: 0.015 mg/m <sup>3</sup> except Nickel carbonyl Ni
Chromium 7440-47-3	TWA: 0.5 mg/m <sup>3</sup> inhalable particulate matter	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 250 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Controls** Showers. Eyewash stations. Ventilation systems.

**Individual protection measures, such as personal protective equipment**

- Eye/Face Protection** Refer to 29 CFR 1910.133 for eye and face protection regulations.
- Skin and Body Protection** Fiber may penetrate unprotected skin so gloves should be worn when handling (disposable latex or heavier).
- Respiratory Protection** Respiratory protection is generally not required during normal operations.
- General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	Solid	<b>Odor</b>	None
<b>Appearance</b>	Metallic fiber	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Not determined		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
<b>pH</b>	Not determined		
<b>Melting point / freezing point</b>	>1200 °C / >2200 °F		
<b>Boiling point / boiling range</b>	Not determined		
<b>Flash point</b>	>260 °C / >500 °F		
<b>Evaporation Rate</b>	0		
<b>Flammability (Solid, Gas)</b>	Not determined		
<b>Flammability Limit in Air</b>			
<b>Upper flammability or explosive limits</b>	Not determined		
<b>Lower flammability or explosive limits</b>	Not determined		
<b>Vapor Pressure</b>	Not determined		
<b>Vapor Density</b>	Not determined		
<b>Relative Density</b>	7.4-9.1 grams/cubic centimeter		
<b>Water Solubility</b>	None		
<b>Solubility in other solvents</b>	Not determined		
<b>Partition Coefficient</b>	Not determined		
<b>Autoignition temperature</b>	Not determined		
<b>Decomposition temperature</b>	Not determined		
<b>Kinematic viscosity</b>	Not determined		
<b>Dynamic Viscosity</b>	Not determined		
<b>Explosive Properties</b>	Not determined		
<b>Oxidizing Properties</b>	Not determined		

**10. STABILITY AND REACTIVITY**

**Reactivity**

Not reactive under normal conditions.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous Polymerization** Will not occur.

**Conditions to Avoid**

Incompatible Materials.

**Incompatible materials**

Strong acids.

**Hazardous decomposition products**

Thermal decomposition or combustion may produce oxides of nickel, chromium and iron.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

- Eye Contact**                      Avoid contact with eyes.
- Skin Contact**                    Avoid contact with skin.
- Inhalation**                        Do not inhale.
- Ingestion**                        Do not ingest.

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Nickel 7440-02-0	> 9000 mg/kg ( Rat )	-	> 10.2 mg/L ( Rat ) 1 h
Iron 7439-89-6	= 30 g/kg ( Rat )	-	-

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms**                              Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

- Sensitization**                        May cause an allergic skin reaction.
- Carcinogenicity**                    Suspected of causing cancer.

Chemical name	ACGIH	IARC	NTP	OSHA
Nickel 7440-02-0		Group 2B	Known Reasonably Anticipated	X

**Legend**

- IARC (International Agency for Research on Cancer)*
- Group 2B - Possibly Carcinogenic to Humans*
- NTP (National Toxicology Program)*
- Known - Known Carcinogen*
- Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen*
- OSHA (Occupational Safety and Health Administration of the US Department of Labor)*
- X - Present*

**STOT - repeated exposure**              Causes damage to organs through prolonged or repeated exposure.

**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .  
**Oral LD50**                              8,997.70 mg/kg

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

**Component Information**

Chemical name	Algae/aquatic plants	Fish	Crustacea
Nickel 7440-02-0	0.18: 72 h Pseudokirchneriella subcapitata mg/L EC50 0.174 - 0.311: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	1.3: 96 h Cyprinus carpio mg/L LC50 semi-static 10.4: 96 h Cyprinus carpio mg/L LC50 static 100: 96 h Brachydanio rerio mg/L LC50	100: 48 h Daphnia magna mg/L EC50 1: 48 h Daphnia magna mg/L EC50 Static
Iron 7439-89-6		13.6: 96 h Morone saxatilis mg/L LC50 static	

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

There is no data for this product.

**Mobility**

Not determined

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods**

**Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**US EPA Waste Number**

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nickel 7440-02-0		Included in waste streams: F006, F039		
Chromium 7440-47-3		Included in waste streams: F032, F034, F035, F037, F038, F039	5.0 mg/L regulatory level	

**California Hazardous Waste Status**

Chemical name	California Hazardous Waste Status
Nickel 7440-02-0	Toxic powder Ignitable powder
Chromium 7440-47-3	Toxic Corrosive Ignitable

**14. TRANSPORT INFORMATION**

**Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

Not regulated

**IATA**

Not regulated

**IMDG**

**Marine Pollutant**

This material may meet the definition of a marine pollutant

**15. REGULATORY INFORMATION**

**International Inventories**

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AICS
Nickel	X	ACTIVE	X	X	X	X	X	X	X
Chromium	X	ACTIVE	X	X	X	X	X	X	X
Iron	X	ACTIVE	X	X	X	X	X	X	X

**Legend:**

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
- ENCS - Japan Existing and New Chemical Substances*
- IECSC - China Inventory of Existing Chemical Substances*
- KECL - Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*
- AICS - Australian Inventory of Chemical Substances*

**US Federal Regulations**

**CERCLA**

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Nickel 7440-02-0	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Chromium 7440-47-3	5000 lb 10 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ RQ 10 lb final RQ RQ 4.54 kg final RQ

**SARA 313**

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Nickel - 7440-02-0	7440-02-0	76-83	0.1
Chromium - 7440-47-3	7440-47-3	18-22	1.0

**CWA (Clean Water Act)**

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Nickel		X	X	
Chromium		X	X	

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Nickel - 7440-02-0	Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Nickel 7440-02-0	X	X	X
Chromium 7440-47-3	X	X	X

**16. OTHER INFORMATION****NFPA****Health Hazards**

Not determined

**Flammability**

Not determined

**Instability**

Not determined

**Special Hazards**

Not determined

**HMIS****Health Hazards**

Not determined

**Flammability**

Not determined

**Physical hazards**

Not determined

**Personal Protection**

Not determined

**Issue Date:** 18-Sep-2007**Revision Date:** 28-Aug-2020**Revision Note:** New format**Disclaimer**

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**End of Safety Data Sheet**