

NFT Zinc Wire

Safety Data Sheet

1. Product and company identification

Product name	Zinc wire
Material uses	Thermal spray
Supplier	Non-Ferrous Traders, Inc 1890 Palmer Avenue, Suite 206 Larchmont, NY 10538 Phone (914) 834-3143 Weekdays 10:00 am – 5:00 pm ET Emergency telephone (914) 834-3143
Product type	Solid wire

2. Hazards identification

Emergency overview

Physical state	Solid wire
Color	Gray
Odor	Odorless
Signal word	CAUTION
Hazard statements	These warnings pertain to the by-products produced during thermal spray. May cause eye and skin irritation.
Precautionary measures	Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
OSHA/HCS status	While this material is not considered hazardous by OSHA Hazard Communication Standard (29 CFR 1910:1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product. By-products generated during the thermal spray process are considered hazardous by the OSHA Hazard Communication Standard.

The health hazards described in this SDS pertain to the by-products generated during thermal spray.

Potential acute health effects

Inhalation	None known
Ingestion	None known

NFT Zinc Wire

Safety Data Sheet

Skin	Slightly irritating to the skin
Eyes	Slightly irritating to the eyes
<u>Potential chronic health effects</u>	
Chronic effects	No known significant effects or critical hazards.
Carcinogenicity	None known
Mutagenicity	None known
Teratogenicity	None known
Developmental effects	None known
Fertility effects	None known
Target organs	Contains material that may cause damage to following organs: skin.

Over-exposure signs/symptoms

Inhalation	Inhalation of zinc fumes may cause metal fume fever. Other effects such as difficulty in breathing, sneezing and coughing may occur.
Ingestion	No specific data
Skin	Adverse symptoms may include the following: Irritation Redness
Eyes	Adverse symptoms may include the following: Irritation Watering Redness
Medical conditions	
Aggravated by over-Exposure	None known.

3. Composition/information on ingredients

This section applies primarily to the wire as supplied.

United States and Canada

Name	CAS No.	%
Zinc	7440-66-6	99.9

Mexico

Name	CAS No.	UN No.	%	IDLH	H	F	R	Special
Zinc	7440-66-6	Not Regulated	99.9	-	1	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

NFT Zinc Wire

Safety Data Sheet

4. First-aid measures

These measures apply primarily to the by-products produced during thermal spray.

Eye contact	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin contact	in case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. Inhalation of zinc fumes may cause metal fume fever. Other effects such as difficulty in breathing, sneezing and coughing may occur.
Ingestion	DO NOT INGEST Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Notes to physician	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

This section applies primarily to the wire as supplied.

Fire hazards in the presence of various substances

As supplied, this product is non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and shocks and mechanical impacts.

NFT Zinc Wire

Safety Data Sheet

These measures apply to the by-products produced during thermal spray.

Extinguishing media

Suitable

Use fire fighting methods and materials that are suited for surrounding fire. Use a Class D extinguishing agent on metal fires.

Not suitable

Water, foam or carbon dioxide.

Special exposure hazards

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Unusual fire

& explosion hazards

Fine zinc dust dispersed in the air in sufficient concentrations and in the presence of an ignition source is a potential DUST EXPLOSION hazard.

Special protective equipment

For fire-fighters

Inhalation of zinc fumes may cause metal fume fever. Fire-fighters must wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Hazardous thermal

Decomposition products

Decomposition products may include the following materials:
Metal oxides/oxides

6. Accidental release measures

These measures apply to the by-products produced during thermal spray.

Personal precautions

No action shall be taken involving any personal risk or without suitable training.
Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate protective equipment (see Section 8).

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

NFT Zinc Wire

Safety Data Sheet

Small spill	Move containers from spill area. Vacuum or sweep up material and place in labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	Move containers from spill area. Prevent spilled material from entering into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a labeled waste container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

This section applies primarily to the wire as supplied.

Handling	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container.
Storage	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright. Do not store in unlabeled containers.

8. Exposure controls/personal protection

This section contains information which applies during the thermal spray process.

Consult local authorities for acceptable exposure limits.

NFT Zinc Wire

Safety Data Sheet

Substance	CAS No.	OSHA PEL	NIOSH Up to 10-hour TWA (ST) STEL (C) Ceiling	ACGIH 8-hour TWA (ST) STEL (C) Ceiling
Zinc	1314-13-2	mg/m ³		
Zinc oxide fume		5	5 mg/m ³ (ST) 10 mg/m ³	5 mg/m ³ (ST) 10 mg/m ³
Total dust		15	5 mg/m ³ (C) 15 mg/m ³	
Respirable fraction		5	5 mg/m ³	2 mg/m ³ (ST) 10 mg/m ³

CAS No. = Chemical Abstract Service Number
 ST = Short Term Exposure Limit
 TLV = Threshold Limit Values
 TWA = Time weighted average

ACGIH = American Conference of Governmental Industrial Hygienists
 NIOSH = National Institute of Occupational Safety and Health

SOURCE: OSHA Annotated Table Z-1^(a)

Recommended monitoring Procedures

Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance document for methods for the determination of hazardous substances will also be required.

Engineering measures

Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures

Wash hands, forearms and face thoroughly after handling and before eating, smoking and using the lavatory and at

NFT Zinc Wire

Safety Data Sheet

the end of the working period. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes

Safety glasses or goggles are recommended when handling this material. During the thermal spray process, safety goggles and dark lenses MUST be worn.

Skin

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands

During the thermal spray process, heat insulated gloves are recommended.

Hearing Protection

Hearing protection that meets local standards MUST be used. During the thermal spray process, the operator and other personnel close to the spray operation must be protected from excessive noise.

Protective Clothing (Pictograms)

Environmental exposure Controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

This section applies primarily to the wire as supplied

Physical state	Solid wire
Color	Gray
Odor	Odorless
Boiling point	906° C (1663° F)
Melting point:	420° C (788° F)

NFT Zinc Wire

Safety Data Sheet

VOC content	0 g/l (0 lb/gal)
Explosive properties	Thermal spray products: Fine dust clouds may form explosive mixtures with air.
Solubility	Insoluble in the following materials: Cold water and hot water.

10. Stability and reactivity

This information applies to the wire as supplied and the by-products produced during thermal spray.

Chemical stability	The product is stable under normal storage conditions.
Conditions to avoid	Store in a cool dry place away from incompatible materials.
Incompatible materials	Strong acids.
Hazardous decomposition Products	During the thermal spray process, gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by radiation during arc spray.
Reactivity	Reacts with oxidants e.g. ammonium nitrate, nitric acid, potassium chlorate. Zinc dust liberates hydrogen gas in contact with oxygen and water. Zinc forms "white rust" in humid air.
Chemical stability	Zinc may form "white rust" in humid air.
Possibility of hazardous Reactions	Zinc dust, including overspray, liberates hydrogen gas in contact with oxygen and water.
Conditions to avoid	Finely pulverized substances mixed with air may cause dust explosion. Finely divided zinc, overspray, reacts with oxidants e.g. ammonium nitrate, nitric acid, potassium chlorate. Zinc dust liberates hydrogen gas in contact with oxygen and water. Zinc forms "white rust" in humid air.
Incompatible materials	Oxidants e.g. ammonium nitrate, nitric acid, potassium chlorate, acids, water.

11. Toxicological information

This information applies to the wire as supplied and the by-products produced during thermal spray.

NFT Zinc Wire

Safety Data Sheet

United States – Canada – Mexico

Acute toxicity

Conclusion/Summary Not available

Chronic toxicity

Conclusion/Summary Not available

Irritation/Corrosion

Conclusion/Summary Mild skin irritant

Sensitizer

Conclusion/Summary Not available

Carcinogenicity

Conclusion/Summary No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary Not available

Teratogenicity

Conclusion/Summary Not available

Reproductive toxicity

Conclusion/Summary Not available

12. Ecological information

This information applies to the wire as supplied.

Ecotoxicity

No known significant effects or critical hazards.

Aquatic Ecotoxicity

Conclusion/Summary

Persistence/degradability Not available

This information applies to the wire as supplied and the by-products produced during thermal spray.

Conclusion/Summary

Other adverse effects

This substance in pulverized form (overspray) is very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

13. Disposal considerations

This information applies to the wire as supplied and the by-products produced during thermal spray.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE

NFT Zinc Wire

Safety Data Sheet

CONTROL/PERSONAL PROTECTION for additional handling information and protection of employees.

Waste disposal

Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protections and waste disposal legislation and any regional authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

This section applies primarily to the wire as supplied

Regulatory Information	UN number	Proper shipping name	Classes	Packaging Group	Label	Additional Information
DOT Classification	Not regulated	-	-	-	-	-
TDG Classification	Not regulated	-	-	-	-	-
Mexico Classification	Not regulated	-	-	-	-	-
ADR/RID Class	Not regulated	-	-	-	-	-
IMDG Class	Not regulated	-	-	-	-	-
IATA-DGR Class	Not regulated	-	-	-	-	-

15. Regulatory information

This section applies primarily to the wire as supplied

NFT Zinc Wire

Safety Data Sheet

United States

HCS Classification

Not regulated

By-products generated during the thermal spray process are also considered hazardous by the OSHA Hazard Communication Standard. The health hazards described in this section pertain to the by-products generated during thermal spray.

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not regulated
 United States inventory (TSCA 8b): All components are listed or exempted.

SARA 302/304: No products were found.

SARA 311/312 Hazards identification: Not regulated.

Clean Water Act (CWA 307): Zinc

Clean Air Act Section

112(b) Hazardous Air Pollutants (HAPs)

Not listed.

Clean Air Act Section

602 Class I Substances

Not listed.

Clean Air Act Section

602 Class II Substances

Not listed.

DEA List I Chemicals

(Precursor Chemicals)

Not listed.

DEA List II Chemicals

(Essential Chemicals)

Not listed.

SARA 313

	Product name	CAS number	Concentration
Form R – Reporting Requirements	Zinc	7440-66-6	99.9
Supplier notification	Zinc	7440-66-6	99.9

SARA 313 notification must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts

The following components are listed: ZINC

New York

The following components are listed: ZINC

New Jersey

The following components are listed: ZINC

Pennsylvania

The following components are listed: ZINC

NFT Zinc Wire

Safety Data Sheet

United States Inventory (TSCA 8b)	The following components are listed: ZINC
<u>Canada</u>	
WHMIS (Canada)	Not controlled under WHMIS (Canada).
<u>Canadian lists</u>	
Canadian NPRI	The following components are listed: ZINC
CEPA Toxic substances	None of the components are listed.
Canada inventory	All components are listed or exempted.
<u>Mexico</u>	
Classification	
Chemical Weapons Convention List Schedule I Chemicals	Not listed
Chemical Weapons Convention List Schedule II Chemicals	Not listed
Chemical Weapons Convention List Schedule III Chemicals	Not listed

16. Other information



CAUTION

MAY CAUSE EYE AND SKIN IRRITATION.

THESE WARNINGS PERTAIN PRIMARILY TO THE BY-PRODUCTS PRODUCED DURING THERMAL SPRAY.

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