

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name Nickel powder
CAS number 7440-02-0
Synonyms N/A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC
 12501 Pauls Valley Road
 Austin, Texas 78737
 U.S.A.

Telephone 512-668-9918
Fax 512-886-4008

1.4 Emergency telephone

Emergency Phone # US & Canada: 1-800-535-5053 INFOTRAC
 International 1-352-323-3500 INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Flammable solids	Category 2
Skin Sensitization	Category 1
Carcinogenicity	Category 1B
Specific Target Organ Toxicity (repeated exposure)	Category 1
Target Organ(s) - Lungs	

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Flammable solid.
May cause an allergic skin reaction.
May cause 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. Use personal protective equipment as required. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. 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. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

Response: If exposed or concerned: Get medical attention/advice.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use.

Fire: In case of fire, use CO₂, dry chemical, or foam for extinction.

Storage: Store locked up.

Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Harmful to aquatic life with long lasting effects.

WARNING: Cancer.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Nickel	-	7440-02-0	<= 100%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
If swallowed	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

4.3 Indication of any immediate medical attention and special treatment needed

If symptoms persist, call a physician and treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.

5.2 Specific hazards arising from the substance or mixture

Keep product and empty container away from heat and sources of ignition.
Hazardous Combustion Products: Nickel oxides.

5.3 Special 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.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
3	2	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Do not allow material to contaminate ground water system.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place.

Incompatibilities

Strong oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Nickel	(Vacated) TWA	1 mg/m ³
	TWA	1 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Nickel	TWA	1.5 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Nickel	IDLH	10 mg/m ³
	TWA	0.015 mg/m ³

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Particulates filter conforming to EN143.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	Silver grey
Odor	Odorless
Odor Threshold	No information available
pH	Not applicable
Melting Point/Range	1455 °C / 2651 °F
Boiling Point/Range	2732 °C / 4949.6 °F
Evaporation Rate	Not applicable
Flammability (solid)	No information available
Flammability or explosive limit	No data available
Upper	
Lower	
Vapor Pressure	No information available
Vapor Density	Not applicable
Density	No information available
Solubility	Insoluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	Not applicable
Molecular Formula	Ni(core) / NiO(shell)
Molecular Weight	58.71 g/mol
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No known reactive hazards based on information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Nickel oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Nickel	>9000 mg/kg (Rat)	-	>10.2 mg/L (Rat) 1 h

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

May cause sensitization by skin contact.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Nickel	7440-02-0	Group 2B	Reasonably Anticipated	Not listed	X	Not listed

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

Lungs.

Reproductive toxicity

No information available.

Chronic effects

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Very toxic to aquatic organisms. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Product	Species	Test Results
Nickel	Freshwater Algae (Pseudokirchneriella subcapitata)	EC50 = 0.174 - 0.311 mg/L, 96 h static EC50 = 0.18 mg/L, 72 h
	Freshwater Fish (Cyprinus carpio)	LC50 = 1.3 mg/L, 96 h semi-static LC50 = 10.4 mg/L, 96 h static
	Freshwater Fish (Brachydanio rerio)	LC50 > 100 mg/L, 96 h
	Water Flea (Daphnia magna)	EC50 = 1 mg/L, 48 h static EC50 > 100 mg/L, 48 h

12.2 Persistence and degradability

Insoluble in water. May persist.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Not likely mobile in the environment due to its low water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN-no	UN3089
Proper Shipping Name	Metal powder, flammable, n.o.s.
Hazard Class	4.1
Packing Group	II

IMDG

UN-no	UN3089
Proper Shipping Name	Metal powder, flammable, n.o.s.
Hazard Class	4.1
Packing Group	II

IATA

UN-no	UN3089
Proper Shipping Name	Metal powder, flammable, n.o.s.
Hazard Class	4.1
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed, Nickel (CAS #7440-02-0), RQ: 100 lb.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Fire Hazard, Acute Health Hazard, Chronic Health Hazard.

SARA 313 (TRI reporting)

Regulated, Nickel (CAS #7440-02-0).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

Clean Water Act (CWA - Toxic Pollutants)

Listed, Nickel, (CAS #7440-02-0).

Clean Water Act (CWA - Priority Pollutants)

Listed, Nickel, (CAS #7440-02-0).

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, Nickel, (CAS #7440-02-0).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Nickel, (CAS #7440-02-0).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Nickel, (CAS #7440-02-0).

California Proposition 65

Listed, Nickel, (CAS #7440-02-0), Carcinogen.

SECTION 16: Other information

Issue date: 09/19/2024

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.