

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name Nickel Sulfate Formic Solution
CAS number See Section 3
Synonyms No information available

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)

Acute Toxicity Category 4
Acute Toxicity Category 4
Skin Irritation Category 2
Eye Damage Category 1

Respiratory Sensitizer Category 1
Skin Sensitizer Category 1
Mutagen Category 2
Carcinogen Category 1A
Reproductive Category 1B
Specific target organ toxicity - repeat exposure Category 1
Aquatic Chronic Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Harmful if swallowed or if inhaled.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Suspected of causing genetic defects.
May cause cancer.
May damage the unborn child.
Causes damage to organs through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Do not breathe vapor/spray.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
[In case of inadequate ventilation] wear respiratory protection.
If swallowed: Immediately call a poison center/doctor.
If on skin: Wash with plenty of water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with national regulations.
Store in a well-ventilated place. Keep container tightly closed.

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

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
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NICKEL SULFATE	No information available	7786-81-4	10-30%
FORMIC ACID	No information available	64-18-6	5-10%
CITRIC ACID	No information available	77-92-9	5-10%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Move affected person to fresh air at once. Get medical attention.

In case of skin contact Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes and get medical attention.

In case of eye contact It is recommended that suitable facilities for quick drenching or flushing of the eyes and body be provided within the work area for immediate emergency use. Remove affected person from source of contamination. Make sure to remove any contact lenses from the eyes before rinsing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

If swallowed Get medical attention immediately. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: Coughing, chest tightness, feeling of chest pressure.

Ingestion: May cause chemical burns in mouth and throat. May cause stomach pain or vomiting.

Skin contact: May cause serious chemical burns to the skin.

Eye contact: Causes severe burns. May cause serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

No specific recommendations.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media No information available

5.2 Specific hazards arising from the substance or mixture

Corrosive gases or vapors.

5.3 Special protective equipment and precautions for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Use protective equipment appropriate for surrounding materials.

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
0	3	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of spray mist and contact with skin and eyes. Provide adequate general and local exhaust ventilation.

6.2 Environmental precautions

Do not discharge into drains or watercourses or onto the ground. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Stop leak if possible without risk. DO NOT touch spilled material! Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material. Collect and dispose of spillage as indicated in Section 13. Wash thoroughly after dealing with a spillage.

6.4 Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid spilling. Avoid contact with skin and eyes. Avoid inhalation of vapors and spray/mists. Provide adequate general and local exhaust ventilation.

Hygiene measures

Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from freezing and direct sunlight. Corrosive storage.

Incompatibilities

See Section 10.

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
FORMIC ACID	Long-term exposure limit (8-hour TWA)	5 ppm 9 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
NICKEL SULFATE	Long-term exposure limit (8-hour TWA)	0.1 mg/m ³ as Ni
FORMIC ACID	Long-term exposure limit (8-hour TWA)	5 ppm 9.4 mg/m ³
FORMIC ACID	Short-term exposure limit (15-minute)	10 ppm 19 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

No information available

Biological occupational exposure limits

No information available

8.2 Exposure controls

Appropriate engineering controls

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.

Personal protective equipment

Eye/face protection

Tight-fitting safety glasses.

Skin protection

It is recommended that chemical-resistant, impervious gloves are worn. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. It is recommended that gloves are made of the following material: Nitrile rubber.

Body Protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

Control of environmental exposure

No information available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Green liquid
Odor	Acidic
Odor Threshold	Not available.
pH	pH (concentrated solution): 0.5-1.5
Melting Point/Range	Not available.
Boiling Point/Range	>100°C / 212°F
Evaporation Rate	Not available.
Flammability (solid)	Not available.
Flammability or explosive limit	Not available.
Upper	Not available.
Lower	Not available.
Vapor Pressure	Not available.
Vapor Density	Not available.
Density	1.25-1.35
Solubility	Not available.
Partition coefficient; n-octanol/water	Not available.
Autoignition Temp	Not available.
Decomposition Temp	Not available.
Viscosity	Not available.
Molecular Formula	Not available.

Molecular Weight	Not available.
VOC Content(%)	Not available.
Oxidizing properties	Not available.

9.2 Other safety information

No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not reactive under normal conditions.

10.2 Chemical stability

Stable at normal ambient temperatures and when used as recommended.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, no hazardous reactions will occur.

10.4 Conditions to avoid

Avoid excessive heat for prolonged periods of time.

10.5 Incompatible materials

Alkalies. Sulfuric Acid.

10.6 Hazardous decomposition products

None at ambient temperatures.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
NICKEL SULFATE	Rat: 361.9 (mg/kg)	Not listed	Rat: 2.48 (dust/mist mg/l)
FORMIC ACID	Rat: 730.0 (mg/kg)	Not listed	Rat: 7.4 (vapours mg/l)

Skin corrosion/irritation

May cause serious chemical burns to the skin.

Serious eye damage/eye irritation

Causes serious eye damage. Immediate first aid is imperative.

Respiratory or skin sensitization

Vapours irritate the respiratory system, and may cause coughing and difficulties in breathing.

Germ cell mutagenicity

No information available

Carcinogenicity

No information available

Specific target organ toxicity - single exposure

No information available

Specific target organ toxicity - repeated exposure

No information available

Reproductive toxicity

No information available

Chronic effects

May cause burns in mucous membranes, throat, esophagus and stomach.

11.2 Additional Information

Ingestion: Causes severe burns. May cause chemical burns in mouth, esophagus and stomach.

SECTION 12: Ecological information**12.1 Toxicity**

Toxic to aquatic life with long lasting effects.

Acute aquatic toxicity:

Component	LE(C)50	M factor (Acute)	M factor (Chronic)
NICKEL SULFATE	0.1 < L(E)C50 ≤ 1	1	1

12.2 Persistence and degradability

No data available.

12.3 Bio accumulative potential

The product does not contain any substances expected to be bioaccumulating.

12.4 Mobility in soil

The product is soluble in water.

12.5 Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

Not determined.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

DOT (US)

UN Number UN1760
Proper Shipping name CORROSIVE LIQUID, N.O.S. (NICKEL SULFATE.FORMIC ACID)
Hazard Class 8
Packaging Group III

IMDG

UN Number UN1760
Proper Shipping name CORROSIVE LIQUID, N.O.S. (NICKEL SULFATE.FORMIC ACID)
Hazard Class 8
Packaging Group III

IATA

UN Number UN1760
Proper Shipping name CORROSIVE LIQUID, N.O.S. (NICKEL SULFATE.FORMIC ACID)
Hazard Class 8
Packaging Group III

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
All ingredients are present.

CERCLA Hazardous Substance List (40 CFR 302.4)

Formic Acid: Final CERCLA RQ: 5,000 lbs
Nickel Sulphate: Final CERCLA RQ: 100 lbs

SARA 304 Emergency release notification

Exempt.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

No information available.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Exempt.

SARA 311/312 Hazardous

This product is listed as:

Acute

Chronic

SARA 313 (TRI reporting)

Formic Acid

Nickel Sulphate

Other federal regulations

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

No information available.

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

No information available.

Safe Drinking Water Act

No information available.

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

No information available.

US state regulations

US. Massachusetts RTK - Substance List

No information available.

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

No information available.

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

No information available.

California Proposition 65

SECTION 16: Other information

Date of Issue: 12/31/2025

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.