

Safety Data Sheet

Stabilizer Plating Additive

Section 1. Identification

Product Name: Stabilizer Plating Additive

Product Code: EP-AS1-100A-01

Recommended use and restrictions on use: For laboratory and R&D use only

Manufacturer Name: NANO3D Systems LLC

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Emergency Number: CHEMTREC: 1-800-424-9300

Section 2. Hazard identification

Classification:

Acute toxicity, Oral	Category 4
Serious Eye Damage	Category 1
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity, Inhalation	Category 1B
Reproductive toxicity	Category 1B
Specific target organ toxicity – repeated exposure	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

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Label elements and precautionary statements:

Signal word: Danger

Pictogram (s):



Hazard statements:

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

Precautionary statements:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not eat, drink or smoke when using this product.
Do not breathe dust, fumes, gas, mist, vapors and spray.
Wash hands thoroughly after handling.
Wear protective gloves, clothing, eye protection and face protection.
If inadequate ventilation wear respiratory protection.
IF SWALLOWED: Call a poison center or physician if you feel unwell.
Rinse mouth. DO NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Wash skin with soap and plenty of water. If irritation persists contact a physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or physician.
If exposed or concerned: Get medical advice.
Remove contaminated clothing and wash before reuse.
Keep only in original container.
Avoid release to the environment.
Absorb spillage to prevent material damage.
Collect spillage.
Dispose of content and container in accordance with local, state, and federal regulations.

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Hazards Not Otherwise Classified (HNOC): None

Section 3. *Composition/information on ingredients*

Component	CAS Number	EINECS Number	Wt %
Proprietary Ingredients	n/a	n/a	<10%
Nickel sulfamate tetrahydrate	124594-15-6	237-396-1	<10%
Water	7732-18-5	231-791-2	Balance

Section 4. *First aid measures*

- General:** Consult a physician. Show this safety data sheet to doctor in attendance. Move out of dangerous area.
- Eye:** Immediately flush eyes with plenty of water. Hold eye open and rinse slowly and gently for at least 15-20 minutes. Contact physician for treatment advice.
- Skin:** Remove contaminated clothing and wash affected area thoroughly with soap and water. Go to hospital, consult physician.
- Inhalation:** Remove patient to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.
- Ingestion:** Contact a poison control center or physician for treatment advice. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless told to do so by the poison control center or physician. If vomiting occurs spontaneously, avoid aspiration.

Section 5. *Fire-fighting measures*

- Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Fire fighting procedures:** Do not flush down sewers or other drainage systems. Material is harmful to aquatic life. For fires in enclosed areas, wear self-contained breathing apparatus and full protective gear. Do not inhale combustion gases.
- Unusual fire and explosion hazards:** For this substance/mixture no limitations of extinguishing agents are given.
- Combustion products:** Extremely high temperatures may remove water by evaporation and lead to thermal decomposition forming nitrogen oxides, sulfur oxides, Nickel/nickel oxides, carbon monoxide, carbon dioxide, and sodium oxide.

Section 6. *Accidental release measures*

Personal precautions, protective equipment and emergency procedures: Wear appropriate skin, eye and respiratory protection. Do not eat, drink or smoke while cleaning up. Ensure adequate ventilation. Avoid breathing vapors, mist, dust, or gas. Evacuate personnel to safe areas. For Personal protection see section 8.

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Methods and materials for containment and cleaning up: Wear appropriate personal protective gear including eye, skin and respiratory protection. Keep unnecessary and/or untrained people away. Isolate spill area and avoid tracking through liquid. Dike and prevent runoff to drains or sewers. For small spills, cover with lime or soda ash and then scoop into polyethylene drums for later disposal. Large spill may be pumped directly into a storage container for later disposal. Do not wash residue to drain or sewer. Refer to Section 15 for spill/release reporting information.

Environmental precautions: Prevent spills and rinsing from entering storm or sanitary sewers or other waterways and contact with soil.

Section 7. *Handling and storage*

Handling: Avoid breathing dust or solution mist. Use in well-ventilated area. Sweep up crystals or powder, vacuum is preferred. Avoid contact with eyes. Eye wash stations should be available in work areas. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Do not empty waste into sanitary drains.

Storage: Store in a cool, dry area. Use with adequate ventilation. Keep container tightly closed when not in use. Avoid storage with oxidizing agents. Store only in the original container. Protect from physical damage. Empty containers may contain hazardous residue.

Section 8. *Exposure controls/personal protection*

Exposure limits:

Component	CAS No.	ACGIH (TLV)	OSHA (PEL)	NIOSH
Nickel sulfamate tetrahydrate	124594-15-6	0.1(mg/m ³)	1.00(mg/m ³)	.015(mg/m ³)

Source:
NIOSH = National Institute of Occupational Safety & Health
OSHA = Occupational Safety and Health Administration
TLV = Threshold Limit Value
ACGIH = American Conference of Industrial Hygienists

Exposure controls:

Handle in accordance with good industrial hygiene and safety practices. Wash hands after handling the product. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

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Personal Protective Equipment (PPE)

Eye protection: Safety glasses with side shields or goggles.

Skin protection: Avoid skin contact, wear rubber/nitrile gloves, and lab coat/apron. Remove/replace gloves as necessary.

Respiratory protection: Wear appropriate, approved respiratory protection when ventilation is inadequate to meet exposure limits.

Section 9.	<i>Physical and chemical properties</i>
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Physical state:	Liquid
Color:	Green
Odor threshold:	Not available
pH:	~ 3
Melting/freezing point:	Not available
Initial boiling point:	Not available
Flash point:	Not applicable
Evaporation rate:	Not available
Flammability (solid, gas):	Not applicable
Upper/lower explosion limits:	Non-explosive
Vapor pressure:	As water
Vapor density:	As water
Specific gravity (H₂O=1):	~1.02
Solubility:	Soluble
Partition coefficient octanol/water:	Not determined
Auto-ignition temperature:	Not applicable
Decomposition temperature:	Not available
Viscosity:	Similar to water

Section 10.	<i>Stability and reactivity</i>
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Reactivity: No information known.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: May react with strong oxidizing agents.

Conditions to avoid: No further relevant information available.

Incompatible materials: Avoid oxidizing agents.

Hazardous Decomposition Products: When heated to decomposition carbon monoxide, carbon dioxide, and sodium oxide (in case of fire see Section 5).

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Section 11. Toxicological information

Information on toxicological effects

Likely route of exposure: Eye contact, skin contact.
Acute Oral Toxicity: No data
Acute Dermal Toxicity: No data
Acute Inhalation Toxicity: No data
Acute Eye Irritation: May cause irritation
Dermal Irritation: May cause irritation

Respirator or skin sensitization

Germ cell mutagenicity: In vitro tests showed mutagenic effects

Carcinogen Listings:

This product is or contains a component that has been reported to be possibly carcinogenic based on its IRAC, ACGIH, NTP, or ESP classification.

Sufficient evidence of carcinogenicity in inhalation studies with animals.

IARC: 1- Group 1: Carcinogenic to humans (Nickel sulfamate tetrahydrate)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Known to be human carcinogen (Nickel sulfamate tetrahydrate)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Effects: No data available.
Clear evidence of adverse effects on development, based on animal experiments.

Target Organ Effects: Repeated exposure- The substance or mixture is classified as specific target organ toxicant.

Section 12. Ecological Information

Aquatic Toxicity: No data available.

Persistence and degradability: No data available.

Bio-accumulative potential: No data available.

Mobility in soil: No data available.

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Section 13. *Disposal considerations*

Product: Waste must be disposed of in accordance with federal, state/provincial and local environmental control regulations. Improper disposal is a violation of law. Do not reuse empty container. If allowed by federal, state/provincial and local authorities, dispose of container in a sanitary landfill or by incineration.

Contaminated packaging: Dispose of as unused product.

Section 14. *Transport information*

Classification for shipment by road or rail, sea (IMDG) and air (IATA/ICAO):

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nickel sulfamate tetrahydrate)
UN number: UN 3082
Hazard class: 9
Packing group: III
Marine Pollutant: Yes (Nickel sulfamate)

Further Information: EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids

Section 15. *Regulatory information*

SARA 302 Components

These product components are not listed.

SARA 313 Components

The product contains the following components that are subject to reporting levels established by SARA Title III, Section 302:

	CAS Number	Concentration
Nickel sulfamate tetrahydrate	124594-15-6	<10%

SARA 311/312 Hazards

Acute health hazard, chronic health hazard.

Pennsylvania Right to Know Components

	CAS Number
Nickel sulfamate tetrahydrate	124594-15-6

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New Jersey Right to Know Components

Nickel sulfamate tetrahydrate CAS Number
124594-15-6

California Prop. 65 Components

Nickel sulfamate tetrahydrate CAS Number
124594-15-6

Notification status: All components of the product are listed in the TSCA-inventory.

Section 16.	Other information
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Training advice: Provide adequate information, instruction and training for operators.

Hazard Statements: Acute toxicity, acute aquatic toxicity, chronic aquatic toxicity, carcinogenicity, serious eyes damage, harmful if swallowed, may cause allergic skin reaction, may cause allergy or asthma symptoms or difficulty breathing if inhaled, suspected of causing genetic defects, may cause cancer by inhalation, may cause cancer by inhalation, maybe damager fertility or unborn child, may cause damage in organs through prolonged or repeated exposure, very toxic to aquatic life with long lasting effects.

NFPA Rating

Health Hazard: 1
Fire Hazard: 0
Reactivity Hazard: 0

SDS Preparation date: July 12, 2017 **Supersedes previous version:** New SDS

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END OF SAFETY DATA SHEET