

SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFIION

NANO3D SYSTEMS LLC
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EMERGENCY NO. 1-800-424-9300 CHEMTREC

MATERIAL NAME: **Electroless Nickel Plating Solution**

REVISED: April 2016

CHEMICAL FAMILY: Electroless Nickel Plating Solution

Product Number: ELN-EL4-100P-01

SECTION 2. HEALTH HAZARD INFORMATION

Hazard Statements

H302 Acute toxicity Oral : Category 4
H316 Skin corrosion / Skin irritation : Category 3
H320 Serious eye damage / Eye irritation : Category 2B
H373 Special target organ systemic toxicity repeated exposure : Category 2
H401 Acute aquatic environmental hazards : Category 2
H413 Chronic aquatic environmental hazards: Category 4
H350 Carcinogenicity: Category 1

Pictograms or Hazard symbols



Warning: Harmful if swallowed. May cause an allergic skin reaction.

Warning: Causes mild skin irritation. Causes eye irritation.
Toxic to aquatic life. May cause long lasting harmful effects to aquatic life.



Danger. May cause cancer if swallowed. Chronic exposure may cause mutagenicity or reproductive hazards.

Precautionary Statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe fume/gas/mist/vapors.
P264 Wash thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P273 Avoid release into the environment.

P280 Wear protective gloves, clothing, and eye and face protection.
 P301 + P312 If swallowed, call a physician if you feel unwell.
 P305 + P351 + P338 If in eyes, rinse cautiously with water for several minutes.
 P308 + P311 If exposed or concerned, call a physician.
 P314 Get medical advice/attention if you feel unwell.
 P330 Rinse mouth.
 P332 + P313 If skin irritation occurs, get medical advice/attention.
 P337 + P313 If eye irritation persists, get medical advice/attention.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3.COMPOSITION/INFORMATION ON INGREDIENTS

Material		Wt %	Toxicity
Ammonium Citrate	CAS# 3012-65-5	5-10	N/E
Ammonium Chloride	CAS# 12125-02-9	5-10	10 mg/m ³
Nickel Chloride Hexahydrate	CAS# 7718-54-9	1-5	0.1 mg/m ³ as Ni
Sodium Hypophosphite	CAS# 10039-56-2	1-5	N/E
Water	CAS# 7732-18-5	70-90	
Total		100	

SECTION 4. FIRST AID MEASURES

EFFECTS OF OVEREXPOSURE

FIRST AID:

Eye Contact: Irritant to the naked eye. Flush eyes with water for at least 15 minutes. Seek medical attention.

Skin Contact: Irritant to exposed skin. Flush skin with water for 15 minutes. Remove affected clothing. If symptoms persist, seek medical attention.

Inhalation: If mist or fumes are inhaled, remove to fresh air. If not breathing give artificial respiration. Seek medical attention. Effects may be delayed. May cause chemical burns to the respiratory tract. Mist/spray is carcinogenic.

Ingestion: Toxic in large quantities. Wash out mouth with water. Seek medical attention immediately.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	<u>LOWER</u>	<u>UPPER</u>
non-flammable	NA	NA	NA	NA

Extinguishing media: Water spray, fog, carbon dioxide, or dry chemical.

Special fire fighting procedures: Wear chemically retardant gear and NIOSH approved self-contained breathing apparatus. Thermal decomposition produces irritating and toxic fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILLS, LEAKS: Ventilate area of leak or spill. Clean up personnel should wear protective clothing and NIOSH approved respirator. Dike and cover the contaminated areas with absorbent, non-combustible material such as earth, sand, or vermiculite.

SECTION 11. TOXICOLOGICAL INFORMATION

Nickel Chloride:

Oral rat LD50: 186 mg/kg

Chronic exposure: human mutagenicity, reproductive hazard.

This product contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. IARC carcinogen list: group 1.

SECTION 12. ECOLOGICAL INFORMATION

When released into the soil, this material may leach into groundwater. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material may be removed from the atmosphere to a moderate extent by dry deposition.

Environmental Toxicity:

LC₅₀ fish 100 mg/l/96 hour

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose of in accordance with all federal state and local regulations. Send waste to an approved waste disposal facility.

SECTION 14. TRANSPORTATION INFORMATION

Non-hazardous/not regulated.

SECTION 15. REGULATORY

Symbol: Carc 2, N, Repr 2

R-Phrase:

R21/22: Harmful in contact with skin and if swallowed.

R43: May cause sensitization by skin contact.

R51: Toxic to aquatic organisms.

The following component of this product is regulated as toxic a chemical under section 313 or Title III SARA, and 40CFR 372:

Nickel Compound N495

SECTION 16. OTHER INFORMATION

NFPA Codes:

Health: 1

Flammability: 0

Reactivity: 0

R8: Contact with combustible material may cause fire.

R35: Causes severe burns.

S29: Do not empty into drains.

S46: If swallowed, seek medical advice immediately and show this container or label.

S61: Avoid release to the environment.

All ingredients of this product are listed on the US TSCA inventory under their parent anhydrous compounds.