

Safety Data Sheet

Leveler Plating Additive

Version date: 01/25/2017

Page 1 of 8

Section 1. Identification

Product Name: Leveler Plating Additive

Product Code: ELN-LS14-202A-01

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

Manufacturer Name: NANO3D Systems LLC

Address: 1110 NE Circle Blvd.,
ATAMI/Bldg. 11
Corvallis, OR 97330

E-mail: info@nano3dsystems.com

Website: www.nano3dsystems.com

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

Section 2. Hazard identification

Classification:

Skin Corrosion/Irritation	Category 1b
Oral Toxicity	Category 4
Eye Damage/Irritation	Category 2
Aquatic Toxicity – Acute	Category 1
Aquatic Toxicity – Chronic	Category 1

Label elements and precautionary statements:

Signal word: Warning

Pictogram (s):



Hazards Not Otherwise Classified (HNOC): None

Safety Data Sheet

Leveler Plating Additive

Version Date: 01/25/2017

Page 2 of 8

Hazard statements:

Harmful if swallowed.
Causes serious eye irritation.
Harmful in contact with skin.
Harmful if inhaled.
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 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.
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.

Section 3. *Composition/information on ingredients*

Component	CAS Number	EINECS Number	Wt %
Copper sulfate pentahydrate	7758-99-8	231-847-6	< 5
Water	7732-18-5	231-791-2	Balance

Safety Data Sheet

Leveler Plating Additive

Version Date: 01/25/2017

Page 3 of 8

Section 4. *First aid measures*

- 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. If irritation persists contact a 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: In all cases this material does not support combustion. Water, water fog, and/or carbon dioxide (CO₂) may be used to cool fire-exposed storage containers, structures and to protect personnel.

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 releasing copper oxide and sulfur dioxide.

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.

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. Copper sulfate solution may deteriorate concrete. 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.

Safety Data Sheet

Leveler Plating Additive

Version Date: 01/25/2017

Page 4 of 8

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. 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
Copper sulfate pentahydrate	7758-99-8	1(mg/m ³)	0.1(mg/m ³)	1(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

Engineering controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Personal Protective Equipment (PPE)

Eye protection: Safety glasses with side shields or goggles.

Skin protection: Rubber gloves, rubber apron during transfer.

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

Safety Data Sheet

Leveler Plating Additive

Version Date: 01/25/2017

Page 5 of 8

Section 9. *Physical and chemical properties*

Physical state:	Liquid
Color:	Blue
Odor threshold:	Not available
pH:	3-4
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 (H ₂ O=1):	~1.02
Solubility:	Completely soluble in water at 20 °C
Partition coefficient octanol/water:	Not determined
Auto-ignition temperature:	Not applicable
Decomposition temperature:	Not available
Viscosity:	Similar to water

Section 10. *Stability and reactivity*

Reactivity: Stable, non-reactive when stored and used according to recommendations.

Chemical stability: No decomposition if used according to specifications.

Possibility of hazardous reactions: None are known.

Conditions to avoid: Strong bases, oxidizers

Incompatible materials: None reported.

Hazardous Decomposition Products: When heated to decomposition cupric oxide and sulfur dioxide may form.

Safety Data Sheet

Leveler Plating Additive

Version Date: 01/25/2017

Page 6 of 8

Section 11. Toxicological information

Information on toxicological effects

Likely route of exposure:	Eye contact, skin contact.
Acute Oral Toxicity:	LD50 Rat: 481 mg/kg (copper sulfate)
Acute Dermal Toxicity:	No applicable information available.
Acute Inhalation Toxicity:	No applicable information available.
Acute Eye Irritation:	No applicable information available.
Dermal Irritation:	No applicable information available.
Carcinogen Listings:	
IARC: No	NTP: No OSHA: No
Reproductive Effects:	No applicable information available.
Target Organ Effects:	No applicable information available.

Section 12. Ecological Information

Aquatic Toxicity:	EC50: 0.024 mg/l (Daphnia magna, copper sulfate)
Persistence and degradability:	There are no data reported for this material; however, it would not be expected to be biodegradable.
Bio-accumulative potential:	There is no evidence to suggest bioaccumulation will occur.
Mobility in soil:	Accidental spillage may lead to penetration in the soil and groundwater. Improper handling and disposal of this material may cause environmental damage.

When released into the soil, this material is not expected to biodegrade. When released into the soil, this material may leach into groundwater. When released into water, this material is not expected to biodegrade. When released into water, this material is not expected to evaporate significantly. This material is expected to significantly bioaccumulate.

Safety Data Sheet

Leveler Plating Additive

Version Date: 01/25/2017

Page 7 of 8

Section 12. Ecological Information

Aquatic Toxicity: EC50: 0.024 mg/l (Daphnia magna, copper sulfate)

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Bio-accumulative potential: There is no evidence to suggest bioaccumulation will occur.

Mobility in soil: Accidental spillage may lead to penetration in the soil and groundwater. Improper handling and disposal of this material may cause environmental damage.

When released into the soil, this material is not expected to biodegrade. When released into the soil, this material may leach into groundwater. When released into water, this material is not expected to biodegrade. When released into water, this material is not expected to evaporate significantly. This material is expected to significantly bioaccumulate.

Section 13. Disposal considerations

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

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. (Copper Sulfate)
UN number: UN 3082
Hazard class: 9
Packing group: III
Marine Pollutant: Yes (Copper sulfate)

Safety Data Sheet

Leveler Plating Additive

Date of Issue: 01/25/2017

Page 8 of 8

Section 15. Regulatory information

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:

This product is not listed under SARA Section 311/312 (40 CFR 372) as a hazard.

SARA 313: This product contains the following SARA 313 Toxic Release Chemicals.

Chemical Name	CAS Number	Concentration
Copper sulfate pentahydrate	7758-99-8	< 2%

The following product components are cited on the lists below:

Chemical Name	CAS Number	List Citations
None		California Proposition 65 List

Section 16. Other information

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

Hazard Statements: H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements: Prevention. P273 Avoid release to the environment.

SDS Preparation date: January 25, 2017 **Supersedes previous version:** New SDS

This SDS contains revisions in the following sections(s): Not applicable. New SDS.

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End of Safety Data Sheet