



Boston BioProducts, Inc

425 Fortune Blvd.

Milford, MA 01757

SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

- 1.1** PRODUCT NAME: Nickel Chloride (0.5 M)
CATALOG #: MT-230
- 1.2** RECOMMENDED USE: Research use or further manufacturing
- 1.3** COMPANY IDENTIFICATION: Boston BioProducts, Inc.
425 Fortune Blvd. Milford, MA 01757
- 1.4** EMERGENCY CONTACT: 1-800-535-5053
TOLL FREE NUMBER: 1-888-881-8691

SECTION 2 – HAZARD(S) IDENTIFICATION

2.1 Classification of the substance or mixture

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

Acute toxicity, oral	Category 3
Acute toxicity, inhalation	Category 3
Skin corrosion/ irritation	Category 2
Sensitization, respiratory	Category 1
Serious eye damage/ eye irritation	Category 2
Sensitization, Skin	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1
Reproductive toxicity	Category 1B
Specific target organ toxicity, repeated exposure	Category 1
Hazardous to the aquatic environment, acute hazard	Category 1
Hazardous to the aquatic environment, chronic hazard	Category 1

2.2 GHS Label elements, including Hazard and Precautionary Statement(s)

Pictogram



Signal word: Danger

Hazard statement(s):

P201	Obtain special instructions before use.
H301	Toxic if swallowed.



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H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

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 dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P285	In case of inadequate ventilation wear respiratory protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P333 + P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P342 + P311	IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.
P362	Take off contaminated clothing and wash before reuse.
P391	Collect spillage. Hazardous to the aquatic environment
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Composition: 500 mM Nickel (II) Chloride Hexahydrate.

Component	CAS Number	Concentration
Nickel (II) Chloride Hexahydrate	7791-20-0	11.89 %
Water	7732-18-5	Rest



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SECTION 4 - FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed: Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2 Special hazards arising from the substance or mixture: Carbon oxides, Nitrogen oxides (NOx).

5.3 Precautions for fire-fighters: Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

5.4 Further information:

Health	Flammability	Instability	Physical Hazards
3	1	0	N/A

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions: Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up: Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections: For required PPE see section 8. For disposal see section 13.



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SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling: Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities: Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Keep in a dry place.

7.3 Specific end use(s): Use in a laboratory fume hood where possible.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

Exposure Guidelines

Component	ACGIH TVL	OSHA PEL	NIOSH IDLH	MEXICO OEL (TWA)
Nickel(II) chloride	TWA: 0.1 mg/m ³	(Vacated) TWA: 0.1 mg/m ³	IDLH: 10 mg/m ³ TWA: 0.015 mg/m ³	TWA: 0.1 mg/m ³

Legend

ACGIH – American Conference of Governmental Industrial Hygienists

OSHA – Occupational Safety and Health Administration

NIOSH IDLH: NIOSH National Institute for Occupational Safety and Health

8.2 Exposure Controls

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

8.3 Personal protective equipment

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin 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
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **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 EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear, Greenish Liquid	Vapor Pressure	No Data Available
Odor	No Data Available	Vapor Density	No Data Available



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Odor Threshold	No Data Available	Relative Density	1.92 g/cm ³
pH	No Data Available	Water Solubility	2,540 g/l at 20 °C (68 °F)- soluble
Melting / Freezing Point	1,001 °C (1,834 °F)	Partition Coefficient	No Data Available
Initial Boiling Point Range	No Data Available	Auto-Ignition Temperature	No Data Available
Flash Point	No Data Available	Decomposition Temperature	No Data Available
Evaporation Rate	No Data Available	Viscosity	No Data Available
Flammability (Solid, Gas)	No Data Available	Explosive Properties	No Data Available
Upper / Lower Flammability or Explosive Limits	No Data Available	Oxidizing Properties	No Data Available

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions

Hazardous Decomposition Products/Hazardous Polymerization: No data available

Incompatibilities: No data available

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Nickel(II) chloride	LD50 = 175 mg/kg (Rat)	-	Rat - male - 4 h - 0.593 mg/l - dust/mist

Toxicologically Synergistic Products: The environmental impact of this product has not been fully investigated

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: Irritating to eyes

Carcinogenicity: The table below indicated whether each agency has any listed ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Nickel(II) chloride	7718-54-9	Group 1	Known	Not Listed	Not Listed	Not Listed

SECTION 12 - ECOLOGICAL INFORMATION

Eco Toxicity: The environmental impact of this product has not been fully investigated

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
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Nickel(II) chloride	EC50: 0.0063 - 0.0125 mg/L, 96h static (Pseudokirchneriella subcapitata) EC50: = 0.66 mg/L, 72h (Pseudokirchneriella subcapitata)	LC50: = 6.9 mg/L, 96h static (Cyprinus carpio) LC50: = 1.3 mg/L, 96h semi-static (Cyprinus carpio) LC50: > 100 mg/L, 96h static (Brachydanio rerio) LC50: 2.83 - 5.99 mg/L, 96h static (Poecilia reticulata) LC50: 29.76 - 43.57 mg/L, 96h semi-static (Poecilia reticulata) LC50: = 9.65 mg/L, 96h flow-through (Poecilia reticulata) LC50: = 25 mg/L, 96h flow-through (Pimephales promelas) LC50: 2.02 - 6.88 mg/L, 96h static (Pimephales promelas) LC50: 1.9 - 4 mg/L, 96h (Pimephales promelas) LC50: 6.63 - 9.15 mg/L, 96h static (Oncorhynchus mykiss) LC50: 6.7 - 9.7 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 2.02 - 6.88 mg/L, 96h static (Lepomis macrochirus) LC50: 18.1 - 25.5 mg/L, 96h flow-through (Lepomis macrochirus)	-	EC50: = 0.51 mg/L, 48h Static (Daphnia magna) EC50: = 6.68 mg/L, 48h (Daphnia magna)
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Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

Results of BPT and vPvB assessment: No data available

Acute Toxicity: No data available

Results of PBT and vPvB assessment: No data available

Other adverse effects: No data available

Chronic Toxicity: There are no known carcinogenic chemicals in this product



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SECTION 13 - DISPOSAL CONSIDERATIONS

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.

Component	RCRA – U Series Wastes	RCRA – P series Wastes
-	-	-

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 - TRANSPORT INFORMATION

DOT	TDG	IATA	IMDG/IMO
UN Number: 3287 Name: Nickel(II) chloride Hazard Class: 6.1 Packing Group: III	UN Number: 3287 Name: Nickel(II) chloride Hazard Class: 6.1 Packing Group: III	UN Number: 3287 Name: Nickel(II) chloride Hazard Class: 6.1 Packing Group: III	UN Number: 3287 Name: Nickel(II) chloride Hazard Class: 6.1 Packing Group: III

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

TCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	-	-	Listed	Listed	Listed	Listed	Listed	Listed	Listed

USA FEDERAL REGULATIONS

SARA 311/312 HAZARDOUS CATEGORIZATION

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

Clean Water Act/ Clean Air Act: No Data Available

Clean Air Act: Not Applicable

California Proposition 65: This product contains Proposition 65 chemicals.

Component	CAS#	Type of Toxicity	Listing Mechanism	Prop 65 NSRL or MADL (µg/day)
Nickel(II) chloride	7791-20-0	Carcinogen, Developmental Male Reproductive	-	Developmental Carcinogen
		-	-	-



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CERCLA: This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substance RQs	CERCLA EHS RQs
Nickel(II) chloride	100 lbs	100 lb 45.4 kg

HMIS Rating

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
2	2	1	0

NFPA Rating

Health hazard	Fire Hazard	Reactivity Hazard
2	1	0

STATE RIGHT TO KNOW

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Nickel(II) chloride	Listed	Listed	Listed	Listed	Listed

US DEPARTMENT OF TRANSPORTATION

REPORTABLE QUANTITY (RQ)	DOT MARINE POLLUTANT	DOT SEVER MARINE POLLUTANT
No	No	No

U.S. DEPARTMENT OF HOMELAND SECURITY: This product does not contain any DHS chemicals.

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

This SDS complies with the requirements of Regulation (EC).

SECTION 16 - OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Boston BioProducts, Inc shall not be held liable for any damage resulting from handling or from contact with the above product. This product is sold for laboratory research and development purposes use only.

Revised: 2025