Safety Data Sheet

File version: 1

Nickel chloride, 4M

SDS Date: 01 Dec 2016

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 4M Nickel chloride
SYNONYMS: Nickel(II) chloride
PRODUCT CODES: 1008380
1008381
MANUFACTURER: Rigaku Reagents
ADDRESS: 9009 New Trails Drive
The Woodlands, TX 77381
USA
PHONE: +1 (281) 362-2300
EMAIL: ReagentOrders@Rigaku.com

CHEMICAL NAME: Nickel(II) chloride
CHEMICAL FORMULA: $NiCl_2$

PREPARED BY: Rigaku Reagents

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

OSHA HAZARDS: Carcinogen, target organ effect, toxic by inhalation., toxic by ingestion, skin and respiratory sensitizer, irritant, teratogen, mutagen

TARGET ORGANS: Lungs

GHS CLASSIFICATION:

Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2B)
Respiratory sensitization (Category 1)
Skin sensitization (Category 1)
Germ cell mutagenicity (Category 2)
Carcinogenicity (Category 1A)
Reproductive toxicity (Category 1B)
Specific target organ toxicity - repeated exposure (Category 1)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

Signal word: Danger

Hazard statement(s):

H301 + H331 Toxic if swallowed or if inhaled
H315 + H320 Causes skin and eye 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.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P201 Obtain special instructions before use.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311 Call a POISON CENTER or doctor/ physician.
P501 Dispose of contents/ container to an approved waste disposal plant.

POTENTIAL HEALTH EFFECTS:

EYES: Causes eye irritation.

SKIN: May be harmful if absorbed through skin. Causes skin irritation.

INGESTION: Toxic if swallowed.

INHALATION: Toxic if inhaled. Causes respiratory tract irritation.

SECTION 2 NOTES:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS: Nickel(II) chloride, De-ionized water

NICKEL(II) CHLORIDE:

CAS NO.	% WT	% VOL
7718-54-9	50-53	

	ppm	mg/m3
OSHA PEL CEILING:		0.1
ACGIH TLV CEILING:		0.1

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

SKIN: Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

INGESTION: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

INHALATION: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT:
F: No data available
C: No data available

AUTOIGNITION TEMPERATURE:
F: No data available
C: No data available

NFPA HAZARD CLASSIFICATION
HEALTH: 2 **FLAMMABILITY: 0** **REACTIVITY: 0**

HMIS HAZARD CLASSIFICATION
HEALTH: 2 **FLAMMABILITY: 0** **REACTIVITY: 0**

EXTINGUISHING MEDIA: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Nickel/nickel oxides

SECTION 5 NOTES: Not flammable or combustible.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

ENVIRONMENTAL PRECAUTIONS: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

EYE 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).

SKIN PROTECTION: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. 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.

WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: clear, green

PHYSICAL STATE: clear liquid

pH AS SUPPLIED: No data available
pH (Other): No data available

BOILING POINT:
F: No data available

C: No data available

FREEZING POINT:
F: No data available
C: No data available

VAPOR PRESSURE (mmHg): No data available
@
F: No data available
C: No data available

VAPOR DENSITY (AIR = 1): No data available

SPECIFIC GRAVITY (H2O = 1): No data available
@
F: No data available
C: No data available

EVAPORATION RATE: No data available

SOLUBILITY IN WATER: No data available
@
F: No data available
C: No data available

VISCOSITY: No data available
@
F: No data available
C: No data available

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID (STABILITY): No data available

INCOMPATIBILITY (MATERIAL TO AVOID): Peroxides

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Nickel/nickel oxides. Other decomposition products - no data available

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:
ORAL LD50: Rat - 186 mg/kg
INHALATION LC50: No data available
DERMAL LD50: No data available

SKIN CORROSION/IRRITATION: No data available.

SERIOUS EYE DAMAGE/EYE IRRITATION: Rabbit - Mild eye irritation - OECD Test Guideline 405

RESPIRATORY OR SKIN SENSITIZATION: May cause allergic respiratory and skin reactions

GERM CELL MUTAGENICITY: In vitro tests showed mutagenic effects

CARCINOGENICITY:
IARC: 1 - Group 1: Carcinogenic to humans (Nickel(II) chloride)

NTP: Known to be human carcinogen (Nickel(II) chloride)
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 TOXICITY: Presumed human reproductive toxicant

SECTION 11 NOTES: No data available.

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:
TOXICITY TO FISH: mortality NOEC - Oncorhynchus mykiss (rainbow trout) - 4.9 mg/l - 96.0 h
TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES: EC50 - Daphnia magna (Water flea) - 6.0 - 9.3 mg/l - 48 h
TOXICITY TO ALGAE: EC50 - Pseudokirchneriella subcapitata (green algae) - 0.006 - 0.012 mg/l - 96 h

PERSISTENCE AND DEGRADABILITY
No data available.

BIOACCUMULATIVE POTENTIAL: Oncorhynchus mykiss (rainbow trout) - 180 d; Bioconcentration factor (BCF): 4

MOBILITY IN SOIL
No data available.

PBT AND vPvB ASSESSMENT
No data available

SECTION 12 NOTES: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS

PRODUCT: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

CONTAMINATED PACKAGING: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME:	Toxic liquid, inorganic, n.o.s. (Nickel(II) chloride, solution)
HAZARD CLASS:	6.1
ID NUMBER:	3288
PACKING GROUP:	III
MARINE POLLUTANT:	No
POISON INHALATION HAZARD:	No

WATER TRANSPORTATION

PROPER SHIPPING NAME:	TOXIC LIQUID, INORGANIC, N.O.S. (Nickel(II) chloride solution)
HAZARD CLASS:	6.1
ID NUMBER:	3288
PACKING GROUP:	III EMS-No: F-A, S-A
MARINE POLLUTANT:	No

AIR TRANSPORTATION

PROPER SHIPPING NAME:	Toxic liquid, inorganic, n.o.s. (Nickel(II) chloride, solution)
HAZARD CLASS:	6.1
ID NUMBER:	3288
PACKING GROUP:	III

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

OSHA HAZARDS: Carcinogen, target organ effect, toxic by inhalation., toxic by ingestion, skin and respiratory sensitizer, irritant, teratogen, mutagen

SARA 302 COMPONENTS: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 COMPONENTS: The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.
Nickel(II) chloride	7718-54-9

SARA 311/312 HAZARDS: Acute health hazard, chronic health hazard

MASSACHUSETTS RIGHT TO KNOW COMPONENTS:

	CAS-No.
Nickel(II) chloride	7718-54-9

PENNSYLVANIA RIGHT TO KNOW COMPONENTS:

	CAS-No.
Nickel(II) chloride	7718-54-9
Water	7732-18-5

NEW JERSEY RIGHT TO KNOW COMPONENTS:

	CAS-No.
Nickel(II) chloride	7718-54-9
Water	7732-18-5

CALIFORNIA PROP. 65 COMPONENTS: WARNING! This product contains a chemical known to the State of California to cause cancer:

	CAS-No.
Nickel(II) chloride	7718-54-9

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

DISCLAIMER: The above information is believed to be correct but does not necessarily include all information and should be used only as a guide. The information in this document is based on our current knowledge and applies to the product with regard to appropriate safety precautions. This document does not represent any guarantee of the properties of the product. Rigaku Reagents will not be held liable for any damage resulting from handling or contact with the above product.