

**NICKEL CHLORIDE HEXAHYDRATE**

**Material Safety Data Sheet**

NAME USED ON LABEL: NICKEL CHLORIDE HEXAHYDRATE  
 CHEMICAL NAME (if single substance): Nickel Chloride Hexahydrate  
 CHEMICAL FAMILY: Soluble Nickel Salt  
 FORMULA: NiCl<sub>2</sub> · 6H<sub>2</sub>O

EMERGENCY PHONE NUMBER : CHEMTREC - 24 HOURS 1-800-424-9300

HAZARDOUS INGREDIENTS			
IDENTITY	CAS No.	%	EXPOSURE LIMITS
Nickel Chloride	7718-54-9	-54	ACGIH-TWA: 0.1 mg/m <sup>3</sup> OSHA-PEL: 1 mg/m <sup>3</sup>
PHYSICAL DATA			
BOILING POINT: -973°C (1)	MELTING POINT: -1001 C		
SPECIFIC GRAVITY: 1.92	VAPOR PRESSURE @ 20 C: N/E		
VAPOR DENSITY(Air=1):	SOLUBILITY IN WATER: Soluble		
% VOLATILE: None	EVAPORATION RATE		
pH (aq. soln): -6.1	(Butyl Acetate=I): N/E APPEARANCE: Green-yellow deliquescent solid.		
FIRE & EXPLOSION DATA			
FLASH POINT (Test Method) N/APP	AUTOIGNITION TEMPERATURE N/A	FLAMMABLE LTS. LEL-N/A UEL-N/A	
EXTINGUISHING MEDIA: Dry chemical powder.			
SPECIAL FIRE FIGHTING PROCEDURES: Do not get material on skin or clothing. Avoid inhalation of dust, fumes or mists. Stay upwind, out of low areas, and ventilate closed spaces before entering. Cool containers from the side with water until fire is out. Use water spray to reduce vapor; do not put water directly on leak or spill area. Keep combustibles away from spilled material. Self-contained breathing apparatus (SCBA) and chemical-protective clothing can be worn but may not provide adequate thermal protection for chemical fire unless stated by the manufacturer. Structural fire fighter's protective clothing may not be effective. Move containers from fire area, if possible to do so without risk.			
*N/A= NOT AVAILABLE			
**N/APP = NOT APPLICABLE			
***N/E = NOT ESTABLISHED			
UNUSUAL FIRE AND EXPLOSION HAZARDS: May evolve hydrochloric gas if heated above 300 deg C.			

## HEALTH HAZARDS

**EYE CONTACT:** May cause irritation to the eyes and surrounding areas characterized by redness, swelling, tearing, and pain.

**SKIN CONTACT:** May cause irritation or an intermediate sensitization which will give allergic dermatosis after further contacts.

**INHALATION:** May cause irritation to the respiratory passages, including the nose, airway, and lungs characterized by sore throat, chest pain, cough, dizziness, headache, nausea, and shortness of breath. Individuals sensitized to nickel may develop asthma, bronchitis, or other respiratory difficulties.

**INGESTION:** Toxic. Harmful if swallowed. Causes nausea, vomiting, dizziness, and diarrhea. The gastrointestinal absorption rate of nickel chloride is estimated as relatively small.

**CHRONIC TOXICITY:** Effects of long-term exposure to this product have not been determined.

**CARCINOGENICITY:**

	NTP	IARC	ACGIH/NIOSH
Yes	X	X	
No			X

The International Agency for Research on Cancer (IARC) has considered that there is sufficient evidence to conclude that "nickel compounds" (but not nickel metal) are carcinogens for man, by inhalation. The National Toxicology Program has listed "nickel" as an anticipated human carcinogen.

## SUGGESTED FIRST AID

**EYES:** Immediately flush eyes with flowing water for at least 15 minutes while holding eyelids away from eyes. Seek medical attention.

**SKIN:** Wash exposed areas thoroughly with soap and flowing water, while removing contaminated clothing and shoes. If irritation persists, seek medical attention.

**INHALATION:** Remove exposed individual from source of exposure. If breathing is difficult, oxygen may be administered by certified persons only. Artificial respiration may be performed only if exposed individual is not breathing. If breathing is difficult, seek medical attention.

**INGESTION:** In case of accidental ingestion of less than 0.5 grams approximately, drink plenty of water. For greater quantities, seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person. **DO NOT** induce vomiting unless directed by a physician.

## REACTIVITY DATA

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur. **CONDITIONS TO AVOID:**

**INCOMPATIBILITY (Materials to Avoid):** Sulfuric acid at temperatures greater than 100 deg C (forms hydrochloric gas).

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrochloric gas by thermal decomposition.

## SPECIAL PROTECTION INFORMATION

**VENTILATION:** Local exhaust or an enclosed handling system is highly recommended. Mechanical (general) ventilation is required.

**RESPIRATORY PROTECTION:** Use NIOSH/MSHA-approved respiratory protection if ventilation is inadequate.

**EYE AND FACE PROTECTION:** Chemical splash goggles. **DO NOT WEAR CONTACT LENSES!**



Single packagings containing greater than 185 pounds of this product meets or exceeds the Reportable Quantity (RQ) of Nickel Chloride. The letters "RQ" must be appended to the Proper Shipping Name (See TRANSPORTATION Section).

### ADDITIONAL INFORMATION

#### RATINGS:

	F	H	R	PPE	SPEC HAZ
HMIS	0	2*	0	X	N/APP
NFPA	0	2	0	N/APP	N/APP

F= Flammability H=Health

R=Reactivity

PPE= Personal Protection Equipment

Spec Haz= Special Health Hazards

W=Water Reactive

OX=Oxidizer

\* = Chronic Hazard

#### SARA Title III Classifications:

Immediate (Acute) Health . .YES

Delayed (Chronic) Health . .YES

Sudden Release of Pressure . NO

Reactive . NO

Fire .NO

Components of this product are identified below if they are present in excess of de minimus reporting levels. Components that are not required to be identified by specific chemical name may have a generic description.

#### SARA Title III Section 302 Extremely Hazardous Substances:

None

#### SARA Title III Section 313 Toxic Chemicals:

Nickel Compounds -54 wt%

#### STATE RIGHT-TO-KNOW

Components of this product which are specifically identified in the ingredients section of this MSDS may be listed as hazardous by these and/or other states: California, Massachusetts, New Jersey, Pennsylvania, Florida, New York, Michigan, Connecticut, Louisiana, Florida, Illinois, Indiana, Kentucky, North Carolina, and Rhode Island.

ATTENTION: This product contains a chemical(s) known to the State of California to cause cancer, birth defects, or other reproductive harm.

#### CAREFULLY—READ—THE FOLLOWING:

The identification of ingredients in this document meets or exceeds the requirements set forth in 29 CFR, 40 CFR, et al. at the date of publication. Ingredients present in a mixture or solution which are generically identified or not referenced in this document are not regulatorily required to be specifically identified or referenced. The information contained herein should be provided to all those who will use, handle, store, transport, or may otherwise be exposed to this product.

Prepared by the Product Safety Department (PSD)