SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Nickel chloride
Chemical formula	$NiCl_2 \cdot 6H_2O$
Manufacturer	**SUMITOMO METAL MINING CO., LTD.**
Product use	This material is used for Nickel-plating.
Distributed by	**Chemerizer Co.,Ltd.**
Telephone	**(662) 8135572-4**

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture according to Regulation (EC) No 1272/2008 and (EU) No 286/2011 [CLP]

Health hazards:

Acute toxicity – Oral	Category 3
Acute toxicity – Inhalation	Category 3
Skin Corrosion/Irritation	Category 2
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

Environmental hazards:

Hazardous to the aquatic environment - acute hazard	Category 1
Hazardous to the aquatic environment - long term hazard	Category 1

HAZARDS EXCLUDED FROM THE GHS CLASSIFICATION CATEGORIES

HEALTH HAZARDS

- If contact with solid or melting solid or solution, may cause strong irritation and sore to eyes and skin.
- On combustion to decompose, form hazardous and corrosive chlorine gas.
- If swallowed large amount, cause gastroenteritis.

Label elements

PICTOGRAM

SIGNAL WORD DANGER

HAZARD STATEMENT

- H301 Toxic if swallowed.
- H331 Toxic if inhaled.
- H315 Causes skin irritation.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317 May cause an allergic skin reaction.
- 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.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

- P201+P202 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- P271+P260+P280+P285+P281 Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves, protective clothing, eye protection or face protection. In case of inadequate ventilation, wear respiratory protection. Use personal protective equipment as required.
- P264+P270 Wash face and hands thoroughly after handling. Do not eat, drink or smoke when using this product.
- P302+P352+P332+P313+P362+P272 IF ON SKIN : Wash with plenty of soap and water. If skin irritation occurs : Get medical advice/attention. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace.
- P304+P340+P342+P311 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
- P301+P310+P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
- P273+P391+P233+P403+P405+P501 Avoid release to the environment. Collect spillage. Keep container tightly closed. Store locked up in a well-ventilated place. Disposal should be in accordance with applicable regional, national and local laws and regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical substance/Mixture Chemical substance

COMPONENT	CAS No.	TSCA	EINECS	%w/w
Nickel chloride	7791-20-0	Listed	231-743-0	$NiCl_2 \cdot 6H_2O$:>97.2 Ni:>24.0

4. FIRST AID MEASURES

Eye contact	Immediately rinse cautiously with plenty of water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Skin contact	Wash with plenty of water and soap. Remove or take off immediately all contaminated clothing. Get medical attention if you feel unwell. Wash contaminated clothing before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately get medical attention.
Ingestion	Rinse mouth. Get medical attention. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

5. FIRE FIGHTING MEASURES

Flammable properties	
Flash point	No data available.
Extinguishing media	
Suitable extinguishing media	This substance is nonflammable. Use adequate extinguishing agents for surrounding fire.
Unsuitable extinguishing media	Use adequate extinguishing agents for surrounding fire. If possible, do not use water spray on this substance.
Protection of firefighters	Wear adequate respiratory protection and chemical-resistant clothing. (heat resistance)
Specific hazards arising from the chemical	On combustion to decompose, form hazardous and corrosive chlorine gas.
Protective equipment and	Move container to safe area, if possible with low risk.

precautions for firefighters

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Immediately isolate the spilled area with adequate distance for all directions. Wear adequate protector refer to Section 8 and avoid contact with eyes and skin or inhaling. Keep unnecessary and unprotected personnel from entering.
Environmental precautions	Do not let this substance enter the environment.
Method for clean-up	Sweep diffused spillage and place in an empty container. Residual substances are collected completely with care and moved to a safe place. Dissolve in water and add calcium hydroxide or sodium carbonate solution, then filter the precipitates and dike the residues. Do not the spillage release to the river.

7. HANDLING AND STORAGE

Handling	Wear protective equipment and set the engineering controls refer to Section 8. Local exhaust or general ventilation may be necessary. (Refer to Section 8) Wear protective gloves when handling. Use only outdoors or in a well-ventilated area. Avoid breathing the dust or fume. Wash hands and face thoroughly after handling.. Avoid to contact: Water, hot surface.
Storage	Powder; provide adequate engineering control for treating hazardous material as lighting or ventilation. Keep away from acids and store in a well-ventilated place. Keep container tightly closed and store in a well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines	ACGIH has established the following exposure limit.[1)] 0.1mg/m^3 (TWA)(as Ni, Soluble inorganic compounds (NOS))
Engineering controls	Store in a well-ventilated place. Keep container tightly closed to avoid contact with water. Powder; Provide local exhaust.

Personal protective equipments

Respiratory protection	Wear respiratory protection.
Skin protection	Wear protective gloves.
Eye / face protection	Wear eye protection. (e.g. A pair of goggles) Wear protective clothing or face protection if necessary.
General hygiene considerations	Do not eat, drink, or smoke during work. Wash hands and face thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Crystal, deliquescence
Color	Green
Odor	Odorless
Melting point	No data available.
Boiling point	No data available.
Flash point	No data available.
Explosive range	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Specific gravity	1.92[2)]
Solubility in water	67.8g/100g(26℃) [2)]
Solubility in other solvents	Soluble in alcohol. [2)]
Partition Coefficient: n-octanol/water	No data available.
Auto-ignition point	No data available.
Decomposition temperature	No data available.
Odor threshold	No data available.
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Viscosity	No data available.

10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal condition.
Conditions to avoid	Water, hot surface.
Incompatible materials	No information available.
Hazardous decomposition products	On combustion to decompose, form hazardous and corrosive chlorine gas.
Possibility of hazardous reactions	No information available.

11. TOXICOLOGICAL INFORMATION

Acute toxicity – oral	Toxic if swallowed. [3)]
Acute toxicity – dermal	No data available
Acute toxicity–inhalation	Toxic if inhaled. [3)]
Skin corrosion/irritation	Causes skin irritation. [3)]
Serious eye damage/eye irritation	No data available
Respiratory sensitization	Respiratory sensitizer. [3)] As nickel compounds including this substance are listed as respiratory sensitization substances by DFG.
Skin sensitization	Skin sensitizer. [3)] As nickel compounds including this substance are listed as skin sensitization substances by DFG.
Germ cell mutagenicity	Suspected of causing genetic defects. [3)]
Carcinogenicity	May cause cancer. [3)] As nickel compound : IARC : Group 1 (Carcinogenic to humans) [4)]
Reproductive toxicity	May damage fertility or the unborn child. [3)]
Specific target organ toxicity (single exposure)	No data available
Specific target organ toxicity (repeated exposure)	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	No data available

12. ECOLOGICAL INFORMATION

Hazardous to the aquatic environment - acute hazard	Very toxic to aquatic life. [3)]
Hazardous to the aquatic environment - chronic hazard	Very toxic to aquatic life with long lasting effects. [3)]
Hazardous to the ozone layer	No data available

13. DISPOSAL CONSIDERATIONS

- Please consult us about the possibility of recycling.
- Disposal should be in accordance with applicable regional, national and local laws and regulations.
- When order to dispose the remainder to the private or public waste disposer, inform the physico-chemical and health hazards of this substance.
- Container should be cleaned up prior to recycling or dispose in accordance with applicable regional, national and local standard method.
- Empty container should be cleaned up prior to disposal.

14. TRANSPORT INFORMATION (not meant to be all-inclusive)

Proper Shipping Name	TOXIC SOLID INORGANIC.N.O.S. (NICKEL CHLORIDE)
UN Number	UN3288
Class	6.1
Sub Risk	None
Packing Group	Ⅲ
Marine Pollutant	applicable

15. REGULATORY INFORMATION (not meant to be all-inclusive)

TSCA Inventory	Listed

This product is followed by the competent regulations in an applicable country or region.

16. OTHER INFORMATION

Reference

1) ACGIH ; “2014 TLVs & BEIs”
2) SUMITOMO METAL MINING CO., LTD.; Unpublished information
3) ESIS Classification and Labelling : CLP/GHS
4) Japanese government as GHS classification. ; ID25A0073 Nickel(II) Chloride hexahydrate

This information only concerns the above-mentioned product and does not need to be valid if used with other(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

(This is the last page of this SDS.)