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### MATERIAL SAFETY DATA SHEET (MSDS)

## SECTION 1. Product identifiers

Product name: Nickel chloride, hexahydrate, 99.9% Product Code: N 1496 CAS No : 7791-20-0

1.2. Relevant identified uses of the substance or mixture and uses advised against Use : Industrial. For professional use only.

 Details of the supplier of the safety data sheet Company identification OTTO CHEMIE PVT LTD
 Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Email info@ottokemi.com

1.4. Emergency telephone number Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm).

### SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Acute toxicity, (Category 3) Acute toxicity, (Category 3) Skin 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), prolonged or repeated exposure if inhaled. Short-term (acute) aquatic hazard, (Category 1) Long-term (chronic) aquatic hazard, (Category 1) 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Hazard Statements H301 + H331 H315 H317 H334 H341 H350i H360D H372 repeated exposure if inhaled. H410

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.
H350i: May cause cancer by inhalation.
H360D: May damage the unborn child.
H372: Causes damage to organs through Lungs

H400: Very toxic to aquatic life.

H301: Toxic if swallowed.

H410: Very toxic to aquatic life with long lasting effects.

#### Danger

Toxic if swallowed or if inhaled. Causes skin irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. May cause cancer by inhalation. May damage the unborn child. Causes damage to organs (Lungs) through prolonged or Very toxic to aquatic life with long lasting effects. Do not handle until all safety precautions have been read and

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P202

Precautionary Statements

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P273 P280 P301 + P310 P302 + P352 P304 + P340 + P311 Supplemental Hazard Statements	understood. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF SWALLOWED: Immediately call a POISON CENTER/ doctor. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. none	
Restricted to professional users. Reduced Labeling (<= 125 ml) Pictogram Signal Word	Danger	
Hazard Statements H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
H317 H341 H350i H372	May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer by inhalation. Causes damage to organs through prolonged or repeated	
exposure if inhaled. H360D H301 + H331	May damage the unborn child. Toxic if swallowed or if inhaled.	
Precautionary Statements P202	Do not handle until all safety precautions have been read and understood.	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.	
P301 + P310 P302 + P352 P304 + P340 + P311	IF SWALLOWED: Immediately call a POISON CENTER/ doctor. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.	
Supplemental Hazard Statements 2.3 Other hazards	none	
This substance/mixture contains no components considered bioaccumulative and toxic (PBT), or very persistent and very levels of 0.1% or higher.		
Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation		
(EU) 2017/2100 or Commission Regulation (EU) 2018/605 a		

#### **SECTION 3: Composition/information on ingredients**

3.1 Substances	
Formula	: Cl2Ni · 6H2O
Molecular weight	: 237,69 g/mol
CAS-No.	: 7791-20-0
EC-No.	: 231-743-0

Component	Classification	Concentration
Nickel(II) chloride hexahydrate		
CAS-No. 7791-20-0 EC-No. 231-743-0	Acute Tox. 3; Skin Irrit. 2; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1A; Repr. 1B; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H331, H315, H334,	<= 100 %

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H317, H341, H350i, H360D, H372, H400, H410 Concentration limits: >= 1 %: STOT RE 1, H372; 0,1 - < 1 %: STOT RE 2, H373; >= 20 %: Skin Irrit. 2, H315; >= 0,01 %: Skin Sens. 1, H317; M-Factor - Aquatic Acute: 1 - Aquatic Chronic: 1
--

For the full text of the H-Statements mentioned in this Section, see Section 16.

### SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

## **SECTION 5: Firefighting measures**

5.1 Extinguishing media Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given. 5.2 Special hazards arising from the substance or mixture Hydrogen chloride gas Nickel/nickel oxides Not combustible. Ambient fire may liberate hazardous vapours. 5.3 Advice for firefighters Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. 5.4 Further information Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

### SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2 Environmental precautions

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Do not let product enter drains. 6.3 Methods and materials for containment and cleaning up Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts. 6.4 Reference to other sections For disposal see section 13. **SECTION 7: Handling and storage** 7.1 Precautions for safe handling Advice on safe handling Work under hood. Do not inhale substance/mixture. Hygiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Hygroscopic. Storage class Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects 7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated SECTION 8: Exposure controls/personal protection 8.1 Control parameters Ingredients with workplace control parameters 8.2 Exposure controls Personal protective equipment Eve/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses Skin protection This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum laver thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L **Body Protection** protective clothing Respiratory protection required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following

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standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P3 The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure Do not let product enter drains.

### SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties a) Physical state b) Color c) Odor d) Melting point/freezing point e) Initial boiling point and boiling range f) Flammability (solid, gas) g) Upper/lower flammability or explosive limits h) Flash point i) Autoignition temperature i) Decomposition temperature k) pH I) Viscosity m) Water solubility

n) Partition coefficient: n-octanol/water o) Vapor pressure p) Density Relative density q) Relative vapor density r) Particle characteristics s) Explosive properties t) Oxidizing properties 9.2 Other safety information No data available

## SECTION 10: Stability and reactivity

10.1 Reactivity
No data available
10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .
10.3 Possibility of hazardous reactions
Violent reactions possible with:
Alkali metals
10.4 Conditions to avoid
Avoid moisture.
no information available
10.5 Incompatible materials
No data available
10.6 Hazardous decomposition products
In the event of fire: see section 5

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crystalline green odorless Melting point: 1.001 °C - (anhydrous substance), decomposes

No data available

The product is not flammable.

No data available

Not applicable No data available

No data available

4,9 at 100 at 20 °C Viscosity, kinematic: No data available Viscosity, dynamic: No data available 2.540 g/l at 20 °C - soluble Not applicable for inorganic substances

No data available 1,92 g/cm3 No data available No data available

No data available

No data available none

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### **SECTION 11: Toxicological information**

11.1 Information on toxicological effects Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals: Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg Inhalation LC50 Rat: > 50mg/L. Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant). Special Remarks on Toxicity to Animals: Not available. Special Remarks on other Toxic Effects on Humans: Not available.

## SECTION 12: Ecological information

12.1 Toxicity Toxicity to fish semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 15,3 mg/l - 96 h Remarks: (ECHA) (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride Toxicity to daphnia and other aquatic invertebrates static test LC50 - Ceriodaphnia dubia (water flea) - 0,013 mg/l - 48 h Remarks: (ECHA) (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride Toxicity to algae static test ErC50 - green algae - 0,243 mg/l - 72 h (OECD Test Guideline 201) Remarks: (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride Toxicity to fish(Chronic toxicity) flow-through test LC50 - Cyprinodon variegatus (sheepshead minnow) - 27,8 mg/l - 28 d Remarks: (ECHA) (anhydrous substance) Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) semi-static test NOEC - Hyalella azteca (Amphipod) - 0,029 mg/l -14 d Remarks: (ECHA) (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride 12.2 Persistence and degradability The methods for determining biodegradability are not applicable to inorganic substances. 12.3 Bioaccumulative potential No data available 12.4 Mobility in soil No data available 12.5 Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. 12.6 Endocrine disrupting properties

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considered to have according to REA0 Delegated regulati	ixture does not contain components e endocrine disrupting properties CH Article 57(f) or Commission on (EU) 2017/2100 or Commission 018/605 at levels of 0.1% or higher. e avoided.	
SECTION 13: Disposal consideration 13.1 Waste treatment methods No data available	15	
SECTION 14: Transport information 14.1 UN number ADR/RID: 3288	IMDG: 3288	IATA: 3288
IMDG : TOXIC SOLID, IN	NORGANIC, N.O.S. (Nickel(II) chloride hexahydrate) NORGANIC, N.O.S. (Nickel(II) chloride hexahydrate) anic, n.o.s. (Nickel(II) chloride hexahydrate)	
ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1
14.4 Packaging group ADR/RID: III	IMDG: III	IATA: III
14.5 Environmental hazards ADR/RID: yes	IMDG Marine pollutant: yes	IATA: no
14.6 Special precautions for user Tunnel restriction code : (E)		
Further information : No data available		
1907/2006. Authorisations and/or restrictions on us REACH - Restrictions on the manufact placing on the market and use of certai dangerous substances, mixtures and a (Annex XVII) : Nickel(II) chloride hexahydrate REACH - Restrictions on the manufact placing on the market and use of certai dangerous substances, mixtures and a (Annex XVII) REACH - Restrictions on the manufact placing on the market and use of certai dangerous substances, mixtures and a (Annex XVII) REACH - Restrictions on the manufact placing on the market and use of certai dangerous substances, mixtures and a (Annex XVII) : Nickel(II) chloride hexahydrate National legislation Seveso III: Directive 2012/18/EU of the European Parliament and of the Counc on the control of major-accident hazard involving dangerous substances. H2 ACUTE TOXIC E1 ENVIRONMENTAL HAZARDS Other regulations	regulations/legislation specific for the as with the requirements of Regulation (EC) No. we wre, in rticles wre, : Nickel(II) chloride hexahydrate in rticles wre, rticles wre, rticles	

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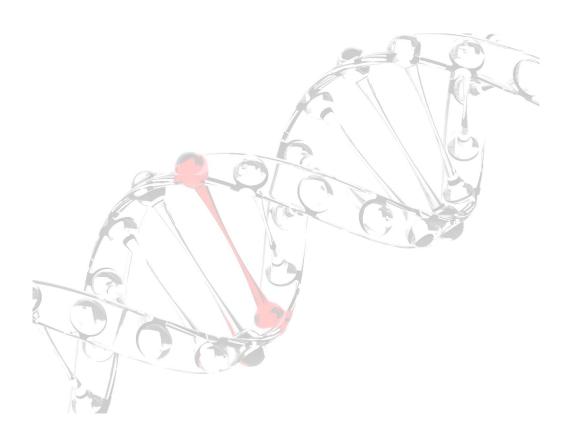
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#### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

#### **SECTION 16: Other Information**

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.



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