1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier
Product Name
Nickel Chloride, Hexahydrate

Other means of identification
Product Code(s)
E256
UN/ID no.
3288
Synonyms
No information available

Recommended use of the chemical and restrictions on use
Recommended Use
For Further Manufacturing Use Only.
Uses advised against
Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet
Company Address
VWR International, LLC
Radnor Corporate Center
100 Matsonford Road
Radnor, PA 19087-8660
Company Phone Number
1-800-448-4442
E-mail Address
info@amresco-inc.com

Manufacturer Address
VWR International, LLC
28600 Fountain Parkway
Solon, Ohio 44139

Emergency Telephone Number
Emergency Telephone Number
Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification
OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute Toxicity - Oral
Category 3
Acute toxicity - Inhalation (Vapors)
Category 3
Skin Corrosion/Irritation
Category 2
Respiratory Sensitization
Category 1
Skin Sensitization
Category 1A
Germ cell mutagenicity
Category 2
Carcinogenicity
Category 1A
Reproductive toxicity
Category 1B
Specific target organ toxicity (repeated exposure)
Category 1

Label elements

Danger

Hazard statements
H301 - Toxic if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H331 - Toxic if inhaled
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

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing must not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment (see .? on this label)
Specific treatment (see .? on this label)
IF ON SKIN: Wash with plenty of water and soap
Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Rinse mouth

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not regulated

Other Information
• Very toxic to aquatic life with long lasting effects
• Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>EC No.</th>
<th>Weight %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6)</td>
<td>7791-20-0</td>
<td>-</td>
<td>95-100</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First Aid Measures
Eye Contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact
Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation
Move to fresh air. If not breathing, give artificial respiration.

Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
No information available.

Specific Hazards Arising from the Chemical
No information available.

Hazardous Combustion

Explosion Data
Sensitivity to Mechanical Impact
None.

Sensitivity to Static Discharge
None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal protection
Ensure adequate ventilation, especially in confined areas.

Environmental Precautions
See Section 12 for additional Ecological information.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up
Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling
Handle in accordance with good industrial hygiene and safety practice. Hygroscopic.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7791-20-0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Measures
- Showers
- Eyewash stations
- Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
- Avoid contact with eyes. Safety glasses with side-shields.

Skin and Body Protection
- Wear protective gloves/clothing.

Respiratory Protection
- If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures
- Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Crystals</td>
<td>No information available</td>
</tr>
<tr>
<td>Appearance</td>
<td>Green</td>
<td>No information available</td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point (High in °C)</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No information available</td>
<td>No information available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to Avoid
Hygroscopic. Protect from moisture.

Incompatible Materials
Peroxides.

Hazardous Decomposition Products

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation
Toxic by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Eye Contact
There is no data available for this product.

Skin Contact
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion
Toxic if swallowed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6)</td>
<td>= 105 mg/kg ( Rat )</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7791-20-0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
No information available.

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

Sensitization
No information available.

Mutagenic Effects
No information available.

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6)</td>
<td>-</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td>7791-20-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reproductive Toxicity
No information available.
STOT - single exposure  
No information available.

STOT - repeated exposure  
No information available.

Chronic Toxicity  
Suspected carcinogen.

Target Organ Effects  
Lungs.

Aspiration hazard  
No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Toxicity to Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6) 7791-20-0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6) 7791-20-0</td>
<td>-</td>
</tr>
</tbody>
</table>

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method  
Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging  
Do not re-use empty containers.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>RCRA</th>
<th>RCRA - Basis for Listing</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6) 7791-20-0</td>
<td>(hazardous constituent - no waste number)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6) 7791-20-0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6) 7791-20-0</td>
<td>-</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

<table>
<thead>
<tr>
<th>UN/ID no.</th>
<th>3288</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>TOXIC SOLIDS, INORGANIC, N.O.S (CONTAINING NICKELCHLORIDE HEXAHYDRATE)</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>6.1</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
</tbody>
</table>
**15. REGULATORY INFORMATION**

**International Inventories**

<table>
<thead>
<tr>
<th>Legend:</th>
<th>TSCA</th>
<th>DSL/NDSL</th>
<th>EINECS/ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA - United States Toxic Substances Control Act Section 8(b) Inventory</td>
<td>Does not comply</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List</td>
<td>Does not comply</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances</td>
<td>Does not Comply</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENCS - Japan Existing and New Chemical Substances</td>
<td>Complies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IECSC - China Inventory of Existing Chemical Substances</td>
<td>Complies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KECL - Korean Existing and Evaluated Chemical Substances</td>
<td>Does not Comply</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PICCS - Philippines Inventory of Chemicals and Chemical Substances</td>
<td>Complies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AICS - Australian Inventory of Chemical Substances</td>
<td>Complies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**U.S. Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Component</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6) 7791-20-0 (95-100)</td>
<td>0.1</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazard Categories**

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

**Clean Water Act**
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6) 7791-20-0</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
</table>

---

Page 7 / 8
Nickel(II) chloride hexahydrate (1:2:6) - 7791-20-0

U.S. State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Prop. 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6) - 7791-20-0</td>
<td>-</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel(II) chloride hexahydrate (1:2:6) - 7791-20-0</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number: Not regulated

16. OTHER INFORMATION

Issuing Date: 16-Sep-2010
Revision Date: 08-Jan-2016
Revision Note: No information available

Disclaimer
The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and its Affiliates shall not be held liable for any damage resulting from handling.

End of Safety Data Sheet