SECTION 1: Identification

1.1 Product identifier

Name 0.1M Nickel Sulfate Solution
Product number N6565

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses General use

1.3 Details of the supplier of the safety data sheet

Teknova
2290 Bert Dr.
Hollister California 95023
United States

Telephone: 831-637-1100
Telefax: 831-637-2355
e-mail: info@teknova.com
Website: www.teknova.com

1.4 Emergency telephone number

CHEM TREC Emergency Phone Number (800)-424-9300

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Category</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.4R</td>
<td>respiratory sensitization</td>
<td>1</td>
<td>Resp. Sens. 1</td>
<td>H334</td>
</tr>
<tr>
<td>A.4S</td>
<td>skin sensitization</td>
<td>1</td>
<td>Skin Sens. 1</td>
<td>H317</td>
</tr>
<tr>
<td>A.5</td>
<td>germ cell mutagenicity</td>
<td>2</td>
<td>Muta. 2</td>
<td>H341</td>
</tr>
<tr>
<td>A.6</td>
<td>carcinogenicity</td>
<td>1A</td>
<td>Carc. 1A</td>
<td>H350</td>
</tr>
<tr>
<td>A.7</td>
<td>reproductive toxicity</td>
<td>1B</td>
<td>Repr. 1B</td>
<td>H360</td>
</tr>
<tr>
<td>A.9</td>
<td>specific target organ toxicity - repeated exposure</td>
<td>1</td>
<td>STOT RE 1</td>
<td>H372</td>
</tr>
</tbody>
</table>

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects
- Delayed or immediate effects can be expected after short or long-term exposure.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)
- Signal word danger
- Pictograms

GHS08

- Hazard statements

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.

- Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Wear personal protective equipment/face protection.
P285 In case of inadequate ventilation wear respiratory protection.
P302+P352 If on skin: Wash with plenty of water.
P304+P341 If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P308+P313 If exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P321 Specific treatment (see on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling

Nickel (ii) Sulfate Hexahydrate

2.3 Other hazards

Hazards not otherwise classified

Toxic to aquatic life with long lasting effects (GHS category 2: aquatic toxicity - acute and/or chronic).

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)
3.2 Mixtures

Description of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Wt%</th>
<th>Classification acc. to GHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI Water</td>
<td>7732-18-5</td>
<td>97.38</td>
<td></td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>2.629</td>
<td>Acute Tox. 4 / H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 / H332</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irrit. 2 / H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Resp. Sens. 1 / H334</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1 / H317</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Muta. 2 / H341</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carc. 1A / H350</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Repr. 1B / H360</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT RE 1 / H372</td>
</tr>
</tbody>
</table>

For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

- Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

- Water jet
5.2 Special hazards arising from the substance or mixture

Hazardous combustion products
Nitrogen oxides (NOx)

5.3 Advice for firefighters
In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Remove persons to safety.

For emergency responders
Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions
Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advises on how to contain a spill
Covering of drains

Advises on how to clean up a spill
Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques
Use of adsorbent materials.

Other information relating to spills and releases
Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Recommendations
- Measures to prevent fire as well as aerosol and dust generation
  Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene
Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.
7.2 Conditions for safe storage, including any incompatibilities

7.3 Specific end use(s)
See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of agent</th>
<th>CAS No</th>
<th>Identifier</th>
<th>TWA [ppm]</th>
<th>TWA [mg/m³]</th>
<th>STEL [ppm]</th>
<th>STEL [mg/m³]</th>
<th>Ceiling-C [ppm]</th>
<th>Ceiling-C [mg/m³]</th>
<th>Notation</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>nickel, inorganic compounds, insoluble</td>
<td>7786-81-4</td>
<td>TLV®</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>i, Ni</td>
<td>AC-GIH® 2018</td>
</tr>
<tr>
<td>US</td>
<td>nickel, insoluble compounds</td>
<td>7786-81-4</td>
<td>PEL (CA)</td>
<td>0.1</td>
<td>Ni</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cal/Osha PEL</td>
</tr>
<tr>
<td>US</td>
<td>nickel, insoluble compounds</td>
<td>7786-81-4</td>
<td>PEL</td>
<td>1</td>
<td>Ni</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>29 CFR 1910.1000</td>
</tr>
<tr>
<td>US</td>
<td>nickel compounds</td>
<td>7786-81-4</td>
<td>REL</td>
<td>0.015 (10 h)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Ni, appx-A</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>

Notation
appx-A NIOSH Potential Occupational Carcinogen (Appendix A)
Ceiling-C ceiling value is a limit value above which exposure should not occur
i inhalable fraction
Ni calculated as Ni (nickel)
STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Endpoint</th>
<th>Threshold level</th>
<th>Protection goal, route of exposure</th>
<th>Used in</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>DNEL</td>
<td>0.05 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>DNEL</td>
<td>104 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - systemic effects</td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>DNEL</td>
<td>0.05 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - local effects</td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>DNEL</td>
<td>1.6 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - local effects</td>
</tr>
</tbody>
</table>

8.2 Exposure controls
Appropriate engineering controls
  General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection
  Wear eye/face protection.

Skin protection
  - Hand protection
    Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

  - Type of material
    Nitrile

  - Other protection measures
    Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection
  In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls
  Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>no data available</td>
</tr>
<tr>
<td>Odor</td>
<td>no data available</td>
</tr>
</tbody>
</table>

Other safety parameters

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>not determined</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>not determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>not relevant, (fluid)</td>
</tr>
</tbody>
</table>
### Explosive limits

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>0 vol%</td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>0 vol%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>Density</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapor density</td>
<td>not determined</td>
</tr>
<tr>
<td>Relative density</td>
<td>information on this property is not available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>not determined</td>
</tr>
</tbody>
</table>

### Partition coefficient

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-octanol/water (log KOW)</td>
<td>this information is not available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-ignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td>not determined</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>none</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>none</td>
</tr>
</tbody>
</table>

### Other information

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2  Other information</td>
<td>there is no additional information</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials

- Oxidizers

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

The classification criteria for these hazard classes are not met.

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Exposure route</th>
<th>ATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>oral</td>
<td>361.9 mg/kg</td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>inhalation: dust/mist</td>
<td>2.48 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation

The classification criteria for this hazard class are not met. Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

The classification criteria for this hazard class are not met. Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

May cause cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Classification</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Legend

1 Carcinogenic to humans

National Toxicology Program (United States): Report on Carcinogens

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Classification</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td></td>
<td>Known to be human carcinogens</td>
<td>10th Report on Carcinogens</td>
</tr>
</tbody>
</table>

Reproductive toxicity

May damage the unborn child. May damage fertility.
Specific target organ toxicity - single exposure

The classification criteria for this hazard class are not met. Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

The classification criteria for this hazard class are not met.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>LC50</td>
<td>15.3 mg/l</td>
<td>fish</td>
<td>96 h</td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>EC50</td>
<td>406 µg/l</td>
<td>aquatic invertebrates</td>
<td>24 h</td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>ErC50</td>
<td>237 µg/l</td>
<td>algae</td>
<td>72 h</td>
</tr>
</tbody>
</table>

Aquatic toxicity (chronic) of components of the mixture

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>ErC50</td>
<td>8,363 µg/l</td>
<td>fish</td>
<td>40 d</td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>LC50</td>
<td>≤144 µg/l</td>
<td>aquatic invertebrates</td>
<td>21 d</td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>EC50</td>
<td>≤108 µg/l</td>
<td>aquatic invertebrates</td>
<td>21 d</td>
</tr>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>10101-97-0</td>
<td>EbC50</td>
<td>6.2 µg/l</td>
<td>aquatic invertebrates</td>
<td>30 d</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.
12.6 Other adverse effects
Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information
Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages
Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks
Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number
Not subject to transport regulations

14.2 UN proper shipping name
not relevant

14.3 Transport hazard class(es)
none

14.4 Packing group
not relevant

14.5 Environmental hazards
non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user
There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT)
Not subject to transport regulations.

International Maritime Dangerous Goods Code (IMDG)
Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)
Not subject to ICAO-IATA.
SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)
  none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)
  none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Remarks</th>
<th>Statutory code</th>
<th>Final RQ pounds (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel (ii) Sulfate Hexahydrate</td>
<td>7786-81-4</td>
<td></td>
<td>1</td>
<td>100 (45,4)</td>
</tr>
</tbody>
</table>

Legend
1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

Clean Air Act none of the ingredients are listed

New Jersey Worker and Community Right to Know Act none of the ingredients are listed

Right to Know Hazardous Substance List

<table>
<thead>
<tr>
<th>Name acc. to inventory</th>
<th>CAS No</th>
<th>Remarks</th>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICKEL SULFATE HEXAHYDRATE (SULFURIC ACID, NICKEL(2+) SALT (1:1), HEXAHYDRATE)</td>
<td>10101-97-0</td>
<td></td>
<td>CA</td>
</tr>
<tr>
<td>NICKEL SULFATE HEPTAHYDRATE (SULFURIC ACID, NICKEL(2+) SALT (1:1), HEPTAHYDRATE)</td>
<td>10101-98-1</td>
<td></td>
<td>CA</td>
</tr>
<tr>
<td>nickel sulfate</td>
<td>7786-81-4</td>
<td></td>
<td>CA MU</td>
</tr>
</tbody>
</table>

Legend
CA Carcinogenic
MU Mutagenic

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987 none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III
**Safety Data Sheet**
acc. to 29 CFR 1910.1200 App D

**0.1M Nickel Sulfate Solution**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic</td>
<td>*</td>
<td>chronic (long-term) health effects may result from repeated overexposure</td>
</tr>
<tr>
<td>Health</td>
<td>2</td>
<td>temporary or minor injury may occur</td>
</tr>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**NFPA® 704**

<table>
<thead>
<tr>
<th>Category</th>
<th>Degree of hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
<td>material that will not burn under typical fire conditions</td>
</tr>
<tr>
<td>Health</td>
<td>2</td>
<td>material that, under emergency conditions, can cause temporary incapacitation or residual injury</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**National inventories**

<table>
<thead>
<tr>
<th>Country</th>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>TSCA</td>
<td>all ingredients are listed</td>
</tr>
</tbody>
</table>

**Legend**

| TSCA   | Toxic Substance Control Act |

**15.2 Chemical Safety Assessment**
Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information, including date of preparation or last revision**

**Indication of changes (revised safety data sheet)**

<table>
<thead>
<tr>
<th>Section</th>
<th>Former entry (text/value)</th>
<th>Actual entry (text/value)</th>
<th>Safety-relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2</td>
<td></td>
<td>Description of the mixture: change in the listing (table)</td>
<td>yes</td>
</tr>
<tr>
<td>8.1</td>
<td>Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>Relevant DNELs of components of the mixture: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>11.1</td>
<td>Acute toxicity estimate (ATE) of components of the mixture: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
</tbody>
</table>
0.1M Nickel Sulfate Solution

Key literature references and sources for data

Classification procedure
Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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