

## Nickel Sulfate, Hexahydrate Crystal, ACS

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Nickel Sulfate, Hexahydrate Crystal, ACS

**Synonyms/Generic Names:** None

**Product Number:** 3735

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information:** 920-623-2140 (Monday-Friday 8:00-4:30)  
[www.columbuschemical.com](http://www.columbuschemical.com)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**Target Organs:** Lungs

**Signal Word:** Danger

**Pictograms:**



**GHS Classification:**

Acute toxicity, Oral	Category 4
Acute toxicity, Inhalation	Category 4
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, Inhalation	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

**GHS Label Elements, including precautionary statements:**

**Hazard Statements:**

H302+H332	Harmful if swallowed or inhaled.
H315	Causes skin irritation.
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 via inhalation.
H410	Very toxic to aquatic life with long lasting effects.

**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.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	In case of inadequate ventilation, wear respiratory protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor/physician if you feel unwell.
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

**Potential Health Effects**

<b>Eyes</b>	Causes eye irritation.
<b>Inhalation</b>	Toxic if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Ingestion</b>	Harmful if swallowed.

**NFPA Ratings**

<b>Health</b>	2
<b>Flammability</b>	0
<b>Reactivity</b>	0
<b>Specific hazard</b>	N/A

**HMIS Ratings**

<b>Health</b>	2
<b>Fire</b>	0
<b>Reactivity</b>	0

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Nickel Sulfate, Hexahydrate	>98	10101-97-0	232-104-9	NiO <sub>4</sub> S · 6H <sub>2</sub> O	262.85 g/mol

**4. FIRST-AID MEASURES**

<b>Eyes</b>	Rinse with plenty of water for at least 15 minutes and seek medical attention.
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<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Skin</b>	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

## 5. FIRE-FIGHTING MEASURES

<b>Suitable (and unsuitable) extinguishing media</b>	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Emits toxic fumes (oxides of nickel and sulfur) under fire conditions. (See also Stability and Reactivity section).

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Pick up and arrange disposal without creating dust. Sweep up and place in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

### Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities). Hygroscopic material.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Nickel Sulfate, Hexahydrate	0.1 mg/m <sup>3</sup>	TLV	ACGIH
	0.015 mg/m <sup>3</sup>	REL	NIOSH
	1 mg/m <sup>3</sup>	TWA	OSHA

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

### Personal Protection

<b>Eyes</b>	Wear chemical safety glasses or goggles.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear nitrile or rubber gloves, apron or lab coat.
<b>Other</b>	Not Available

### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Blue, crystalline solid.
Odor	Not Available
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	2.07 g/cm <sup>3</sup>
Solubility (ies)	Not Available
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	Not Available
<b>Incompatible Materials</b>	Strong oxidizing agents.
<b>Hazardous Decomposition Products</b>	Oxides of nickel and sulfur.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

*Nickel Sulfate, Hexahydrate*

<b>Skin</b>	Not Available
<b>Eyes</b>	Not Available
<b>Respiratory</b>	LC50 Inhalation - rat - 4 h - 2.48 mg/l
<b>Ingestion</b>	LD50 Oral - rat - 361 mg/kg

**Carcinogenicity**

<b>IARC</b>	1 - Group 1: Carcinogenic to humans (nickel sulfate hexahydrate).
<b>ACGIH</b>	A1: Confirmed human carcinogen (nickel sulfate hexahydrate).
<b>NTP</b>	Known to be human carcinogen (nickel sulfate hexahydrate).
<b>OSHA</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Signs & Symptoms of Exposure**

<b>Skin</b>	Irritation, redness, itchiness.
<b>Eyes</b>	Irritation, redness, watering eyes, itchiness.
<b>Respiratory</b>	Irritation, coughing, wheezing.
<b>Ingestion</b>	Irritation, nausea, vomiting, diarrhea.

<b>Chronic Toxicity</b>	Human carcinogen. May cause cancer by inhalation.
<b>Teratogenicity</b>	Presumed human reproductive toxicant.
<b>Mutagenicity</b>	In vitro tests showed mutagenic effects.
<b>Embryotoxicity</b>	Not Available
<b>Specific Target Organ Toxicity</b>	Inhalation - Causes damage to organs through prolonged or repeated exposure.
<b>Reproductive Toxicity</b>	Presumed human reproductive toxicant May damage the unborn child.
<b>Respiratory/Skin Sensitization</b>	May cause allergic respiratory and skin reactions.

**12. ECOLOGICAL INFORMATION****Ecotoxicity***Nickel Sulfate, Hexahydrate*

<b>Aquatic Vertebrate</b>	Not Available
<b>Aquatic Invertebrate</b>	Not Available
<b>Terrestrial</b>	Not Available

<b>Persistence and Degradability</b>	Not Available
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

**13. DISPOSAL CONSIDERATIONS**

<b>Waste Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container or residues.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

## 14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Good (<100lbs)
TDG	Not Dangerous Good (<100lbs)
IMDG	Not Dangerous Good (<100lbs)
Marine Pollutant	Yes
IATA/ICAO	Not Dangerous Good (<100lbs)

## 15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	Not Listed
California Proposition 65	Not Listed
Rhode Island: Hazardous Substance List	Not Listed
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Not Listed
Pennsylvania: Hazardous Substance List	Not Listed
New Jersey: Right to Know Hazardous Substance List	Listed: Nickel Sulfate, Hexahydrate
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazards, Chronic Health Hazards.
SARA 312	Acute Health Hazards, Chronic Health Hazards.
SARA 313	Not Listed
WHMIS Canada	Not Listed

## 16. OTHER INFORMATION

Revision	Date
Original	08/01/2012
Revision 1	08/07/2013
Revision 2	01/29/2015
Revision 3	09/09/2021

Disclaimer: The information provided in this Safety Data Sheet ("SDS") is correct to the best of our knowledge, information, and belief at the date of publication. The information in this SDS relates only to the specific Product identified under Section 1, and does not relate to its use in combination with other materials or products, or its use as to any particular process. Those handling, storing, or using the Product should satisfy themselves that they have current information regarding the particular way the Product is handled, stored or used and that the same is done in accordance with federal, state and local law. WE DO NOT MAKE ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE. WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, INJURY, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.