

Safety Data Sheet

Issue Date: 15-Apr-2015

Revision Date: 01-Oct-2015

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Nickel Oxide

Other means of identification

Synonyms NiO; Nickel(II) Oxide.

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals and manufacture of substances.

Details of the supplier of the safety data sheet

Supplier Address

Nexceris, LLC
404 Enterprise Dr.
Lewis Center, OH 43035
www.nexceris.com

Emergency Telephone Number

Company Phone Number Non-emergency calls/questions: 1-614-842-6606

Fax: 1-614-842-6607

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Green solid

Physical State Solid

Odor Odorless

Classification

Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed

Signal Word

Danger

Hazard Statements

May cause an allergic skin reaction

May cause cancer

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
 Use personal protective equipment as required
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
 IF ON SKIN: Wash with plenty of soap and water
 If skin irritation or rash occurs: Get medical advice/attention
 Wash contaminated clothing before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms NiO; Nickel(II) Oxide.

Chemical Name	CAS No	Weight-%
Nickel oxide	1313-99-1	100

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice	Provide this SDS to medical personnel for treatment.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Inhalation	Remove to fresh air.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects

Symptoms	May cause an allergic skin reaction. May be harmful if swallowed. Causes damage to organs through prolonged or repeated exposure.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician 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 Not determined.

Specific Hazards Arising from the Chemical

Product is not flammable.

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 Precautions Use personal protective equipment as required. Avoid creating dust.

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas. 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 Clean-Up With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Dispose of contents/container to an approved waste disposal plant.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Obtain special instructions before use. Do not eat, drink or smoke when using this product. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up.

Incompatible Materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nickel oxide 1313-99-1	TWA: 0.2 mg/m ³ Ni inhalable fraction	TWA: 1 mg/m ³ Ni (vacated) TWA: 1 mg/m ³ Ni	IDLH: 10 mg/m ³ Ni TWA: 0.015 mg/m ³ except Nickel carbonyl Ni

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear approved safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory Protection Follow OSHA respirator regulations in 29 CFR 1910.134 or European Standard EN 149. Use NIOSH/MSHA or European Standard 149. Use NIOSH/MSHA or European Standard 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Solid	Odor	Odorless
Appearance	Green solid	Odor Threshold	Not determined
Color	Green		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not determined	
Melting Point/Freezing Point	1984 °C / 3603 °F	
Boiling Point/Boiling Range	Not determined	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	Not determined	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information****Eye Contact**

Avoid contact with eyes.

Skin Contact

May cause an allergic skin reaction.

Inhalation

Avoid inhalation of dust.

Ingestion

May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Nickel oxide 1313-99-1	> 5000 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects**Symptoms**

Please see section 4 of this SDS for symptoms.

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

May cause an allergic skin reaction.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Nickel oxide 1313-99-1	A1	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Nickel oxide 1313-99-1	127.3: 72 h Pseudokirchneriella subcapitata mg/L EC50	100: 96 h Brachydanio rerio mg/L LC50 static		100: 48 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Not regulated

IATA

Not regulated

IMDG

Marine Pollutant

This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Nickel oxide	Present	X		Present		Present	X	Present	X	X

Legend:*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS - Japan Existing and New Chemical Substances**IECSC - China Inventory of Existing Chemical Substances**KECL - Korean Existing and Evaluated Chemical Substances**PICCS - Philippines Inventory of Chemicals and Chemical Substances**AICS - Australian Inventory of Chemical Substances***US Federal Regulations****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).

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

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Nickel oxide - 1313-99-1	1313-99-1	100	0.1

CWA (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)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Nickel oxide		X		

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Nickel oxide - 1313-99-1	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Nickel oxide 1313-99-1	X	X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	2	0	0	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	Not determined	Not determined	Not determined	Not determined

Issue Date: 15-Apr-2015
Revision Date: 01-Oct-2015
Revision Note: Company name change

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet