



SAFETY DATA SHEET

NICKEL OXIDE
BLACK/GREEN

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Directives

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	Nickel Oxide
SYNONYMS:	Nickel (II) Oxide, Nickel Monoxide
CAS#:	Mixture
PRODUCT USE:	Various uses
CHEMICAL SHIPPING NAME/CLASS:	Nickel Oxide Non-Regulated
U.N. NUMBER:	N/A
MANUFACTURER'S NAME:	Hunter Chemical LLC
ADDRESS:	220 Commerce Drive, Suite 405, Fort Washington, PA 19034
EMERGENCY PHONE:	(800) 424-9300 (CHEMTREC)
BUSINESS PHONE:	(215) 461-1900
DATE OF PREPARATION:	September 23, 2010
DATE OF REVISION:	November 6, 2013
DATE OF REVIEW:	November 6, 2013

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: Warning!

Product Description: This product is a Green-Grey or Black crystalline solid with no odor.

Health Hazards: Harmful if swallowed or inhaled. Causes irritation to skin, eyes and respiratory tract. May cause nasal or lung damage. May cause allergic skin or respiratory reaction. Cancer hazard. Can cause cancer. Risk of cancer depends on duration and level of exposure.

Flammability Hazards: Non-Flammable product.

Reactivity Hazards: This product is not reactive.

Environmental Hazards: Release of the product may cause adverse effects to the aquatic environment.

Emergency Recommendations: Emergency responders must have personal protective equipment and fire protection appropriate for the situation to which they are responding.

EU LABELING AND CLASSIFICATION: This product meets the definition of a hazardous substance or preparation according to EC-Directives 67/548/EEC or 1999/45/EC.

COMPONENT(S) DETERMINING HAZARD:

Nickel, Nickel (II) Oxide

GHS CLASSIFICATIONS:

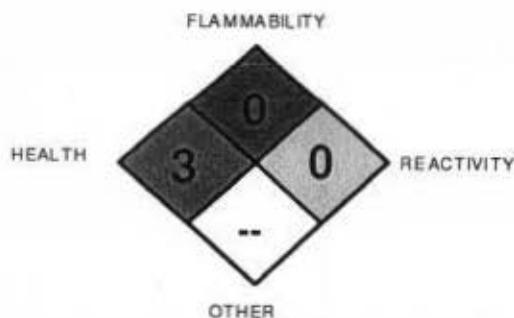
Skin Sensitization Category 1

Carcinogenicity Category 1A

Aquatic Toxicity Category 2

SIGNAL WORD : Danger

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD			
REACTIVITY (YELLOW) 0			
PROTECTIVE EQUIPMENT			
HEAD	EYES	RESPIRATORY	SKIN
RESPIRATOR	SAFETY GLASSES	RESPIRATOR	PROTECTIVE CLOTHING
For the use and labeling of the product, see the MSDS.			



Scale: 0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe * = Chronic hazard

HAZARD STATEMENT:

H317	May cause an allergic skin reaction
H350	May cause cancer
H401	Toxic to aquatic life



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- H402 Harmful to aquatic life
H413 May cause long lasting harmful effects to aquatic life

PREVENTION STATEMENT :

- P103 Read label before use (applies only where the substance is available to the general public)
P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P261 Avoid breathing dust/fume/gas/mist/vapor/spray
P272 Contaminated work clothing should not be allowed out of the workplace
P273 Avoid release to the environment. This statement does not apply where this is the intended use
P280 Wear protective gloves/protective clothing/eye protection/face protection
P281 Use personal protective equipment as required

RESPONSE STATEMENT:

- P321 Specific treatment is advised – see first aid instructions
P363 Wash contaminated clothing before reuse
P302 +P352 IF ON SKIN: Wash with plenty of soap and water
P308 + P313 IF exposed or concerned: Get medical advice/attention
P333 + P313 IF skin irritation or rash occurs: Get medical advice/attention

HEALTH EFFECTS OR RISKS FROM EXPOSURE:

ACUTE: Acute exposure to this product can result in irritation of the respiratory system, eyes and skin. If ingested, irritation of the gastrointestinal system may occur.

CHRONIC: Prolonged exposure to excessive concentrations of dust may cause chronic pulmonary disorders. Nickel and certain nickel compounds are considered carcinogenic and noted for producing nasal and lung cancer.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients:	WT%	CAS#	EINECS #	Hazard Classification	Risk Phrases
Nickel	>80%	7440-02-0	231-111-4	Carc. Cat 3 [T] Toxic	R48/23 ,R43 ,R52-53
Nickel (II) Oxide	<20%	1313-99-1	215-215-7	Carc..Cat 1[T] Toxic	R49,R48/23, R43, R53
Balance of other ingredients is less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					None

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250: 2000.

4. FIRST-AID MEASURES

SKIN EXPOSURE: If this product contaminates the skin, begin decontamination with running water. Minimum flushing is for 5 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual should seek medical attention if any adverse effect occurs.

EYE EXPOSURE: If this product enters the eyes, open contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Remove contact lenses if worn. Have contaminated individual "roll" eyes. Minimum flushing is for 15 minutes. Contaminated individual must seek immediate medical attention.

INHALATION: If dusts generated by this product are inhaled, remove contaminated individual to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing distress continues.

INGESTION: Routine use of this product is not expected to cause any situation which could lead to ingestion. If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION.

If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin contact with some nickel compounds in sensitive individuals may cause dermatitis (nickel itch).

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.



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5. FIRE-FIGHTING MEASURES

FLASH POINT: Not Applicable

AUTOIGNITION TEMPERATURE: Not Applicable

FLAMMABLE LIMITS (in air by volume, %): Lower NA Upper NA

FIRE EXTINGUISHING MATERIALS: Use fire extinguishing methods below:

Water Spray: Yes

Carbon Dioxide: Yes

Foam: Yes

Dry Chemical: Yes

Halon: Yes

Other: Any "C" Class

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is not flammable and does not contribute to a fire. May evolve toxic gases (Nickel Oxides) if strongly heated.

Explosion Sensitivity to Mechanical Impact: No

Explosion Sensitivity to Static Discharge: No

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Proper protective equipment should be used. Stop the flow of material, if this can be done safely. Contain discharged material. For spills of solid material, sweep-up or vacuum spilled solid, minimizing the generation of dust. Place in a proper container for reclamation or disposal. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing dusts generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: Containers of this product must be properly labeled. Empty containers should be handled with care. Store containers in a cool, dry location. Keep container tightly closed when not in use.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Chemical Name	CAS#	ACGIH TLV	OSHA TWA
Nickel	1313-99-1	0.2 mg/m ³	1 mg/m ³

The above Exposure limits are for Nickel, metal and insoluble compounds, as Ni:

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use a chemical fume hood or local exhaust ventilation, and process enclosure if necessary, to control airborne dust. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Safety glasses or goggles are recommended. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.



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HAND PROTECTION: Use chemically-resistant gloves when handling this product. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Use body protection appropriate for task (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE (Physical State) and COLOR: Green or black-Grey crystalline solid with no odor

ODOR: No odor

ODOR THRESHOLD: Not Applicable

pH: Not Available

MELTING/FREEZING POINT: ~ 1984°C (3603°F)

BOILING POINT: Not Available

FLASH POINT: Not Applicable

EVAPORATION RATE (n-BuAc=1): Not Applicable

FLAMMABILITY (SOLID, GAS): Not Available

UPPER/LOWER FLAMMABILITY OR EXPLOSION LIMITS: Not Available

VAPOR PRESSURE (mm Hg @ 20°C (68°F): Not Applicable

VAPOR DENSITY: Not Applicable

RELATIVE DENSITY: 6.67

SPECIFIC GRAVITY: 4.9

SOLUBILITY IN WATER: Negligible

PARTITION COEFFICIENT (n-octanol/water): Not Available

AUTO-IGNITION TEMPERATURE: Not Applicable

DECOMPOSITION TEMPERATURE: Not Available

VISCOSITY: Not Applicable

10. STABILITY and REACTIVITY

STABILITY: Stable under conditions of normal storage and use.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic gases and vapors such as nickel carbonyl may be released.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Can react violently with fluorine, hydrogen peroxide, hydrogen sulfide, iodine, barium oxide.

POSSIBILITY OF HAZARDOUS REACTIONS: Will not occur.

CONDITIONS TO AVOID: Incompatible materials.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

Nickel CAS# 7440-02-0

LD 50 (Intraperitoneal): 250 mg/kg (Rat)

TCLo (Inhalation): 15 mg/m³/91W-1 (Guinea pig-tumors)

SUSPECTED CANCER AGENT: Ingredients within this product are found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are considered to be, or suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product can be irritating to the skin, eyes, and respiratory system with prolonged contact.

SENSITIZATION TO THE PRODUCT: This product may cause allergic skin reactions (e.g., rashes, welts).

REPRODUCTIVE TOXICITY INFORMATION: No reports concerning the effects of this product and its components on the human reproductive system.



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12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: Nickel is one of the most mobile heavy metals in aquatic environments and can persist indefinitely in natural waters. It is toxic to plants at 50 – 200 ppm.

CHEMICAL EFFECT ON PLANTS, ANIMALS AND AQUATIC LIFE: This product is harmful to aquatic life in very low concentrations. This product will be toxic to fish and marine organisms when applied to streams, ponds, rivers or lakes.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

14. TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS: This product is not classified (per 49 CFR 172.101) by the U.S. Department of Transportation.

PROPER SHIPPING NAME:	Nickel Oxide GN-50
HAZARD CLASS NUMBER and DESCRIPTION:	N/A
UN IDENTIFICATION NUMBER:	N/A
PACKING GROUP:	N/A
DOT LABEL(S) REQUIRED:	N/A

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER: N/A

MARINE POLLUTANT: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA): This product is not considered as dangerous goods.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is not considered as dangerous goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is not considered by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

SARA 313 Reporting: Nickel Compounds 100%

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the components of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Nickel CAS#7440-02-0 100Lbs.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory or are exempted from listing.

OTHER U.S. FEDERAL REGULATIONS: None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): Ingredients within this product are on the Proposition 65 Lists.

Warning! This product contains a chemical(s) known to the State of California to cause cancer.

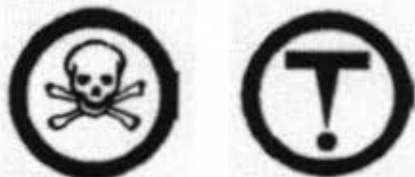
CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: The components of this product are on the DSL Inventory, or are exempted from listing.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: Class D1B Toxic Material; D2B Materials causing other toxic effects.



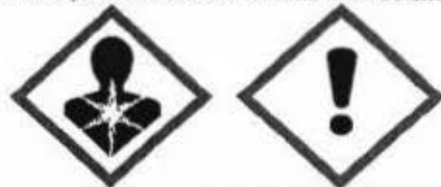
EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION: This product meets the definition of the following hazard class as defined by the European Economic Community Guidelines.

EU CLASSIFICATION: Carc. Cat 1; [T] Toxic

EU RISK PHRASES: R49: May cause cancer by inhalation; R43: May cause sensitization by skin contact; R48/23: Toxic: danger of serious damage to health by prolonged exposure through inhalation; R53: May cause long term adverse effects in the aquatic environment.

EU SAFETY PHRASES: S53: Avoid exposure-obtain instructions before use; S45: In case of accident or if you feel unwell, seek medical advice immediately; S61: Avoid release to the environment.



AUSTRALIAN INFORMATION FOR PRODUCT: The components of this product are listed on the International Chemical Inventory list.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

JAPANESE ENCS INVENTORY: The components of this product are on the ENCS Inventory as indicated in the section on International Chemical Inventories, below.

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No component of this product is a listed Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac: Listed

Australian Inventory of Chemical Substances (AICS): Listed

Korean Existing Chemicals List (ECL): Listed

Japanese Existing National Inventory of Chemical Substances (ENCS): Listed

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed

Swiss Giftliste List of Toxic Substances: Listed

U.S. TSCA: Listed

16. OTHER INFORMATION

PREPARED BY: Paul Eigbrett – (GHS SDS Compliance PLUS)

DATE OF PRINTING: August 19, 2014

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. Hunter Chemical LLC assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, Hunter Chemical LLC assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.

END OF SDS SHEET