

Material Safety Data Sheet

Nickel Nanopowder

Revision Date: 07/03/2011

Date Issued: 11/24/2006

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY / UNDERTAKING

Product name	Nickel
Product code	NM-0028-HP
Supplier	IoLiTec Ionic Liquids Technologies GmbH Salzstrasse 184 D-74076 Heilbronn Germany
Telephone	+49 (0)7131 – 898390
Fax	+49 (0)7131 – 89839109
Emergency telephone	+49 (0)179 – 5322578
Email	msds@iolitec.de

2 COMPOSITION / INFORMATION ON INGREDIENTS

2.1 Classification of the substance or mixture

Classification (67/548/EEC or 1999/45/EC)

Highly flammable.

Danger of serious damage to health by prolonged exposure through inhalation.

Classification (REGULATION (EC) No 1272/2008)

Flammable solids, Category 1, H228

Skin sensitisation, Category 1, H317

Carcinogenicity, Category 2, H351

Specific Target Organ Toxicity - Repeated exposure, Category 1, H372

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2.2 Label elements

Labelling (67/548/EEC or 1999/45/EC)

Hazard description:

Label for supply



T Toxic



F Highly flammable

Information pertaining to particular dangers for man and environment

Risk phrases

R11: Highly flammable.

R40: Limited evidence of a carcinogenic effect.

R43: May cause sensitisation by skin contact.

R48/23: Toxic: danger of serious damage to health by prolonged exposure through Inhalation.

Safety phrases

S16: Keep away from sources of ignition - No smoking.

S22: Do not breathe dust.

S36: Wear suitable protective clothing.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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Labelling (REGULATION (EC) No 1272/2008, GHS)

Hazard statements



H-phrases

H228: Flammable solid.

H317: May cause an allergic skin reaction.

H351: Suspected of causing cancer .

H372: Causes damage to organs through prolonged or repeated exposure .

Precautionary statements

P-phrases

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat/sparks/open flames/hot surfaces . - No smoking.

P260: Do not breathe dust/fume/gas/mist/vapours/spray .

P280: Wear protectic gloves/protective clothing/eye protection/face protection .

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray .

3 HAZARDS IDENTIFICATION

Ingredient name	Nickel
CAS No.	7440-02-0
Empirical Formula	Ni
Molecular weight	58.71 amu

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4 FIRST AID MEASURES

General	Contaminated clothing should be removed and washed before being reused.
Inhalation	Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen.
Ingestion	Immediately rinse mouth and provide fresh air. Get medical attention immediately.
Skin	Wash the skin immediately with water.
Eyes	Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention immediately. Continue to rinse for at least 15 minutes.

5 FIRE FIGHTING MEASURES

Extinguishing media	Use: extinguishing powder. Do not use water, do not use carbon dioxide.
Special risks	Flammable powder. Emission of toxic fumes under fire conditions possible.
Protective measures in fire	Wear self-contained breathing apparatus and protective clothing.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions during spill	Evacuate area. Shut off all heat or ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Wear self-contained breathing apparatus, rubber boots and gloves.
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Spill cleanup methods

Avoid contact with skin or inhalation of spillage, dust or vapor, Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste.

7 HANDLING AND STORAGE

Usage precautions

Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and open flame. Do not use in confined spaces without adequate ventilation and/or respirator.

Storage precautions

Store in a closed container in a cool, dry, well ventilated area.

Special storage criteria

Store away from oxidizing and acidic materials and halogens.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Protective equipment

Safety goggles. Chemical resistant gloves. Protective clothing. Protective mask when high concentrations are present.

Process control measures

Provide eyewash station and safety shower. Use engineering controls to reduce air contamination to permissible exposure levels.

Ventilation

Provide adequate general and local exhaust ventilation.

Respirators

Use high efficiency particulate respirator with appropriate filter when high concentrations are presents

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Exposure limits

Ni	mg/m ³
Denmark OEL TWA	0.05
Germany	carcinogen
Norway OEL TWA	0.05
Sweden LLV	0.5
Switzerland OEL	0.5
United Kingdom OEL TWA	0.1

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid
Color	Black
Odor/taste	No characteristic odor.
Melting Point	1453 °C
Boiling Point	2730 °C
Flammability	Highly flammable
Density	8.9 g/cm ³ (20 °C)
Water	Insoluble

10 STABILITY AND REACTIVITY

Stability	No particular stability concerns if handled according to specifications.
Conditions to avoid	Oxidizing agents, acids, halogens, sulfur, ammonia
Hazardous Decomposition Products	Highly flammable in air Metal oxide fume.

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11 TOXICOLOGICAL INFORMATION

Ingestion	Harmful if swallowed.
Inhalation	Harmful to mucous membranes.
Skin	Irritating effect
Eyes	Irritating effect
Sensitization	Sensitization possible through skin contact
Other information	Tumorigenic effects have been observed on tests with laboratory animals
Subacute to chronic toxicity	May cause a form of dermatitis May cause intestinal problems, convulsion, asphyxia Nickel dusts as considered as carcinogenic to the respiratory tract.

12 ECOLOGICAL INFORMATION

Environmental hazards	Avoid washing into water courses. Avoid contaminating public drains or water supply.
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13 DISPOSAL CONSIDERATIONS

Disposal method	Contact specialist disposal companies. Dispose of in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical.
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14 TRANSPORT INFORMATION

Land transport RID/ADR

UN#: 3089

Class: 4.1

Packing group: II

Proper Shipping Name: Metal powders, flammable, n.o.s. (nickel)

Maritime transport IMDG

UN#: 3089

Class: 4.1

Packing group: II

Proper Shipping Name: Metal powders, flammable, n.o.s. (nickel)

Air transport IATA

UN#: 3089

Class: 4.1

Packing group: II

Proper Shipping Name: Metal powders, flammable, n.o.s. (nickel)

15 REGULATORY INFORMATION

In accordance with local and national regulations.

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16 OTHER INFORMATION

DISCLAIMER

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