



Material Safety Data Sheet

Nickel(II) hydroxide, c.p., 60-61% Ni

MSDS# 53189

Section 1 - Chemical Product and Company Identification

MSDS Name: Nickel(II) hydroxide, c.p., 60-61% Ni  
Catalog Numbers: AC275020000, AC275020010, AC275020050, AC275022500  
Synonyms: Nickel Dihydroxide; Nickelous Hydroxide.

Company Identification: Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

Company Identification: (USA) Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

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CAS#: 12054-48-7  
Chemical Name: Nickel dihydroxide  
%: 100  
EINECS#: 235-008-5  
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Hazard Symbols:

XN N



Risk Phrases:

20/22 40 43 50/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! May cause respiratory tract irritation. Harmful if inhaled. May cause allergic skin reaction. Cancer suspect agent. May be harmful if swallowed. May cause eye and skin irritation. May cause cancer based on animal studies. Target Organs: Lungs, skin.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. Causes "nickel itch" which is a dermatitis resulting from sensitization to nickel, which is characterized by skin eruptions, followed by discrete ulcers that may discharge and become crusted, or by eczema.

Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.

Inhalation: Harmful if inhaled. May cause respiratory tract irritation.

Chronic: May cause cancer according to animal studies. Symptoms of overexposure to nickel can cause sensitization, dermatitis, allergic asthma and pneumonitis.

### Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**Notes to Physician:**

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Autoignition Temperature:** Not applicable.

**Flash Point:** Not applicable.

**Explosion Limits:** Not available

**Lower:**

**Explosion Limits:** Not available

**Upper:**

**NFPA Rating:** health: 2; flammability: 0; instability: 0;

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Nickel dihydroxide	0.2 mg/m3 TWA (inhalable fraction, as Ni) (listed under Nickel, inorganic compounds, insoluble).	0.015 mg/m3 TWA (as Ni, except Nickel carbonyl) (listed under Nickel compounds).10 mg/m3 IDLH (as Ni, except Nickel carbonyl) (listed under Nickel compounds).	1 mg/m3 TWA (as Ni) (listed under Nickel soluble compounds).1 mg/m3 TWA (as Ni) (listed under Nickel insoluble compounds).

OSHA Vacated PELs: Nickel dihydroxide: 0.1 mg/m3 TWA (as Ni) (listed under Nickel soluble compounds) 1 mg/m3

TWA (as Ni) (listed under Nickel insoluble compounds)

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Powder

Color: lime green

Odor: none reported

pH: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: 230 deg C ( 446.00°F)

Decomposition Temperature:

Solubility in water: Negligible

Specific Gravity/Density: 4.15

Molecular Formula: H<sub>2</sub>NiO<sub>2</sub>

Molecular Weight: 92.70

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, dust generation, excess heat, strong oxidants.

Incompatibilities with Other Materials: Strong acids.

Hazardous Decomposition Products: Carbon monoxide, carbon monoxide, carbon dioxide, nickel oxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 12054-48-7: QR7040000

RTECS:

**CAS# 12054-48-7:** Inhalation, rat: LC50 = 1200 mg/m<sup>3</sup>/4H;

LD50/LC50: Oral, rat: LD50 = 1515 mg/kg;

Skin, rat: LD50 = >2 gm/kg;

Carcinogenicity: Nickel dihydroxide - California: carcinogen, initial date 10/1/89 NTP: Known carcinogen (Nickel compounds). IARC: Group 1 carcinogen

Other: The hazards associated with nickel may be seen in this product. See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Daphnia: Daphnia: 51mg/L; 48H

Other: For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

## Section 14 - Transport Information

US DOT

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.

Hazard Class: 9

UN Number: UN3077

Packing Group: III

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

USA RQ: CAS# 12054-48-7: 10 lb final RQ; 4.54 kg final RQ

## Section 15 - Regulatory Information

### European/International Regulations

#### European Labeling in Accordance with EC Directives

Hazard Symbols: XN N

Risk Phrases:

R 20/22 Harmful by inhalation and if swallowed.

R 40 Limited evidence of a carcinogenic effect.

R 43 May cause sensitization by skin contact.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 22 Do not breathe dust.

S 36 Wear suitable protective clothing.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

### WGK (Water Danger/Protection)

CAS# 12054-48-7: Not available

### Canada

CAS# 12054-48-7 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2A, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 12054-48-7 is listed on Canada's Ingredient Disclosure List

### US Federal

#### TSCA

CAS# 12054-48-7 is listed on the TSCA Inventory.

## Section 16 - Other Information

MSDS Creation Date: 7/28/1999

Revision #5 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the

company has been advised of the possibility of such damages.

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