

SAFETY DATA SHEET

Nickel Hydroxycarbonate

1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

Product name : Nickel Hydroxycarbonate
 Common / Trade name : Nickel Hydroxycarbonate 33% ; Nickel Hydroxycarbonate 40% ; Nickel Hydroxycarbonate 46% ; Nickel Hydroxycarbonate 49% ; Nickel Hydroxycarbonate 42% - 44%

Use of the substance/preparation : Industrial applications: Manufacture of chemicals. Pigments. Catalyst.

Company/undertaking identification

Supplier or representative of supplier : Umicore Cobalt & Specialty Materials
 Rue du Marais 31
 1000 Bruxelles
 BE Belgium
 Phone : +32 2777636

e-mail address of person responsible for this SDS : info.ipds@umicore.com

Emergency telephone number : Carechem24 : +32 3 213 15 70

Date of issue : 25/07/2008.

Date of previous issue : 24/07/2008.

2. Hazards identification

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Carc. Cat. 3; R40
 Xn; R20/22
 R43
 N; R50/53

Human health hazards : Limited evidence of a carcinogenic effect. Harmful by inhalation and if swallowed. May cause sensitization by skin contact.

Environmental hazards : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See section 11 for more detailed information on health effects and symptoms.

3. Composition/information on ingredients

Substance/preparation : Substance

Ingredient name	CAS number	%	EC number	Classification
nickel hydroxycarbonate	12607-70-4	100	235-715-9	Carc. Cat. 3; R40 Xn; R20/22 R43 N; R50/53
See section 16 for the full text of the R-phrases declared above				

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8.

4. First aid measures

First aid measures

- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion** : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : No specific fire or explosion hazard.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

See section 11 for more detailed information on health effects and symptoms.

- Hazardous combustion products** : No specific data.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
- Methods for cleaning up** : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for

Note: see section 8 for personal protective equipment and section 13 for waste disposal.

7. Handling and storage

- Handling** : Do not ingest. Avoid contact with skin and clothing. Avoid contact of spilled material and runoff with soil and surface waterways. Avoid exposure. Use suitable protective equipment (section 8). Avoid generation of dust.
- Storage** : Keep container tightly closed. Keep container in a well-ventilated area.
- Packaging materials**
- Recommended** : Use original container.

8. Exposure controls/personal protection

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
nickel hydroxycarbonate	ACGIH TLV (United States, 1/2006). Notes: as Ni Substance identified by other sources as a suspected or confirmed human carcinogen. Adopted Values enclosed are those for which changes are proposed. Consult the Notice of Intended Changes for current proposal. See Notice of Intended changes. TWA: 0,2 mg/m ³ , (as Ni) 8 hour(s). Form: Insoluble

Exposure controls

- Occupational exposure controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Recommended:
EU : disposable particulate mask or half-face mask type P3 (EN 140-143 or EN 149) .
USA and Canada : Wear NIOSH approved, properly fitted HEPA type respirator.
- Skin protection / Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: Wear suitable gloves.
EU : (EN 374) .
Canada and USA : Wear appropriate gloves for task. Latex or similar type gloves worn inside the leather or cotton gloves will reduce skin contact.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Recommended:
EU : safety glasses with side-shields (EN 166) .
Canada : Wear CSA approved safety glasses with side shields. Mono goggles provide better protection in dusty conditions.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Hygiene measures

- General information** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used.

9. Physical and chemical properties

General information

Appearance

- Physical state : Solid. [Powder.]
Color : Green.
Odor : Odorless.

Important health, safety and environmental information

- pH : Not available.
Flash point : Not available.
Explosive properties : Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.
Oxidizing properties : Not available.
Density : 2,6 g/cm³

9. Physical and chemical properties

Solubility : Very slightly soluble in the following materials: cold water.

10. Stability and reactivity

Stability : The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

Hazardous decomposition : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Potential acute health effects

Inhalation : Harmful by inhalation.
Ingestion : Harmful if swallowed.
Skin contact : May cause sensitization by skin contact.
Eye contact : No known significant effects or critical hazards.

Acute toxicity

Ingredient name	Result	Dose	Route	Species
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Potential chronic health effects

Ingredient name	Carcinogenic effects	Mutagenic effects	Developmental toxicity	Impairs fertility
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nickel hydroxycarbonate	Carc. Cat. 3; R40	-	-	-
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Carcinogenicity : May cause cancer, based on animal data. Limited evidence of a carcinogenic effect. Risk of cancer depends on duration and level of exposure.
 Classified 3 (Possible for humans.) by European Union [Nickel Hydroxycarbonate]. Carc. Cat. 3; R40

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Additional information : nickel hydroxycarbonate: Inhalation of this material may cause sensitive individuals to develop eczema and/or asthma.

12. Ecological information

Environmental effects : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
 This product is recyclable. Consideration of disposal via this route should be given.



European waste catalogue (EWC) : Not available.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

14. Transport information

International transport regulations

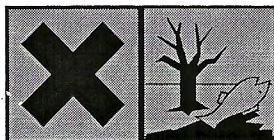
14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
ADR/RID Classification	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (nickel hydroxycarbonate)	9	III		Hazard identification number 90 Limited quantity LQ27 CEFC Tremcard 90GM7-III
ADNR Classification	UN3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (nickel hydroxycarbonate)	9	III		-
IMO/IMDG Classification	Not regulated.	-	-	-	-	-
IATA Class	Not regulated.	-	-	-	-	-

15. Regulatory information

EU regulations

Hazard symbol or symbols :



Harmful, Dangerous for the environment

Risk Phrases :

R40- Limited evidence of a carcinogenic effect.
R20/22- Harmful by inhalation and if swallowed.
R43- May cause sensitization by skin contact.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases :

S22- Do not breathe dust.
S36/37- Wear suitable protective clothing and gloves.
S60- This material and its container must be disposed of as hazardous waste.
S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

Contains :

nickel hydroxycarbonate

235-715-9

Product use :

Industrial applications.

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - Europe

16. Other information

Full text of R-phrases referred to in sections 2 and 3 - Europe

R40- Limited evidence of a carcinogenic effect.
R20/22- Harmful by inhalation and if swallowed.
R43- May cause sensitization by skin contact.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications referred to in sections 2 and 3 - Europe

Carc. Cat. 3 - Carcinogen Category 3
Xn - Harmful
N - Dangerous for the environment

History

Date of issue : 25/07/2008.
Date of previous issue : 24/07/2008.
Version : 1.01

☑ Indicates information that has changed from previously issued version.

Notice to reader

16. Other information

To the best of our knowledge, the information contained in this Material Safety Data Sheet is accurate and reliable on presently available resources. However, neither the seller nor any of its subsidiaries assumes any responsibility or liability whatsoever for the accuracy or completeness of the information contained herein. This Material Safety Data Sheet shall not constitute a guarantee for any specific product features. Final determination of suitability of this material is the sole responsibility of the user. All materials may present unknown hazards and should be used and handled with caution and following reasonable safety procedures. Consequently the buyer assumes all risks in connection with the use and handling of this material.

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