

Vale Inco Crude Nickel Carbonate

Product Information

Vale Inco Crude Nickel Carbonate

Vale Inco America's Inc.
Park 80 West, Plaza Two
Saddle Brook, NJ 07663

Chemtrec 24 hr Emergency No. 1-800-424-9300

WHMIS Classification: Class D2B

Hazardous Ingredients

Hazardous Ingredients	Calculated Composition	C.A.S. No.	PEL ¹ -mg/m ³	TLV ² -mg/m ³
Basic Nickel Carbonate (<i>compounds ranging from</i> 2NiCO ₃ · 3Ni(OH) ₂ · xH ₂ O 4NiCO ₃ · 3Ni(OH) ₂ · xH ₂ O	60-75	3333-67-3 29863-10-3	1	0.2 *
Calcium Carbonate (CaCO ₃)	0.5-1.5	1317-65-3	n.av.	n.av.
Sodium Sulfate, decahydrate (Na ₂ SO ₄ · 10H ₂ O) Sodium Chloride (NaCl)	25-40	n.av. 7647-14-5	(a) n.av	n.av. n.av.

* - As insoluble inorganic nickel compounds

Physical and Chemical Data

Light, green, odorless solid, which, upon drying, ranges in size from a fine powder to agglomerated hard lumps.

Ingredient	Mol. wt.	Specific Gravity	m.p. °C	b.p. °C	Sol. in H ₂ O g/100ml
Basic Nickel Carbonate	n.av.	n.av.	decomposes	n.av.	n.av.
Calcium Carbonate	100.09	2.71	decomposes	n.av.	0 in cold water
Sodium Sulfate, decahydrate	322.19	1.464	32.38	n.av.	11 at 0°C
Sodium Chloride	58.44	2.165	801	1413	35.7 at 0°C

Crude nickel carbonate was filtered at a pH of 8.5.

Physical Hazards

Not applicable.

Health Hazards³

Basic Nickel Carbonate

LD₅₀ ORAL RAT 1044 mg/kg

Inhalation: The International Agency for Research on Cancer (IARC) concluded there was sufficient

MATERIAL SAFETY DATA SHEET

MSDS

evidence that nickel compounds are carcinogenic to humans (Group 1). In 2002, the U.S. National Toxicology Program listed all nickel compounds to be known human carcinogens.

Skin Contact: Prolonged contact may irritate the skin and mucous membranes.

Eye Contact: May cause eye irritation.

Ingestion: Basic nickel carbonate ($2\text{NiCO}_3 \cdot 3\text{Ni}(\text{OH})_2 \cdot x\text{H}_2\text{O}$ to $4\text{NiCO}_3 \cdot 3\text{Ni}(\text{OH})_2 \cdot x\text{H}_2\text{O}$) has a relatively low oral toxicity; its oral rat LD_{50} is 1044 mg/kg. The U.S. National Institute for Occupational Safety and Health (NIOSH) concluded there is no evidence that nickel and its inorganic compounds are carcinogenic when ingested.

Calcium Carbonate

Inhalation: Calcium carbonate is defined by the American Conference of Governmental Industrial Hygienists as a nuisance particulate.

Inhalation of dust may be irritating to the respiratory tract.

Skin Contact: Prolonged contact may irritate the skin and mucous membranes.

Eye Contact: May cause eye irritation.

Precautions for Safe Storage, Handling and Use

Do not inhale powder. Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limits. If ventilation alone cannot so control exposure, use NIOSH-approved respirators selected according to OSHA 29CFR 1910.134. Maintain airborne nickel carbonates as low as possible.

Avoid contact with skin and clothing. Wear suitable gloves. Wash skin thoroughly after handling. Launder clothing and gloves as needed. Avoid eye contact. Wear suitable eye protection depending on user operations.

Spill, Leak and Disposal Procedure

If spilled, return to original container. Wear appropriate NIOSH-approved respirators if collection and disposal of spills are likely to cause the concentration of airborne contaminants to exceed the exposure limits.

Nickel-containing waste is normally collected to recover nickel values. Should waste disposal be deemed necessary, follow the relevant governmental regulations.

Emergency and First Aid Procedures

Inhalation: Remove to fresh air and seek medical attention.

Skin: Wash skin thoroughly with plenty of water. Seek medical attention.

Eye contact: Immediately flush eyeballs with plenty of water. Seek medical attention.

Wounds: Cleanse wounds thoroughly to remove any particles.

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SARA Section 313 Supplier Notification

This product contains the following chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

Basic Nickel Carbonate

Refer to the Hazardous Ingredients section of this MSDS for the appropriate CAS numbers and percent by weight.

Preparation Information

Prepared by: Vale Inco Limited
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Product Stewardship (416) 361-7801

MSDS available online at www.valeinco.com
msds@valeinco.com

Note:

Vale Inco believes that the information in this Material Safety Data Sheet is accurate. However, Vale Inco makes no express or implied warranty as to the accuracy of such information and expressly disclaims any liability resulting from reliance on such information.

Footnotes:

- 1 *Threshold Limit Value of the American Conference of Governmental Industrial Hygienists.*
- 2 *Exposure Limits for user operations will depend on the relevant governmental regulations.*
- 3 *Describes possible health hazards of the product supplied. If user operations change it to other chemical forms, whether as end products, intermediates or fugitive emissions, the possible health hazards of such forms must be determined by the user.*