The Hall Chemical Company

MATERIAL SAFETY DATA SHEET

NICKLE CARBONATE

SECTION I - IDENTIFICATION OF PRODUCT

SUPPLIER'S NAME THE HALL CHEMICAL COMPANY	EMERGENCY TELEPHONE NUMBER CHEMTREC: 800/424-9300 HALL CHEMICAL: 216/944-8500
ADDRESS 28960 LAKELAND BOULEVARD WICKLIFFE, OH 44092-0200	
CHEMICAL NAME AND SYNONYMS Nickel Carbonate	TRADE NAMES AND SYNONYMS Nickel Carbonate
HAZARDOUS MATERIAL DESCRIPTION & PROPER SHIPPING NAME (49CFR172.101) N/A	HAZARD CLASS (49CFR 172.101) N/A
CHEMICAL FAMILY Inorganic Metallic Salt	FORMULA $NiCO_3$
DATE THIS FORM PREPARED February 1, 1994 PREPARED BY J. GANDHI	CAS NUMBER 3333-67-3

SECTION II - HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	OCCUPATIONAL EXPOSURE LIMITS OSHA PEL	 ACGIH TWA (1993-94)
Nickel Carbonate Contains approximately 45% Ni	1.0 mg/m^3 as Nickel	1.0 mg/m^3 as Nickel (1993-94)
Nickel Carbonate		

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	VAPOR PRESSURE (mm HG)	VAPOR DENSITY (AIR=1)
Decomposes	N/A	N/A
SOLUBILITY IN WATER 0.009 gr/100 gms @ 25°C	SPECIFIC GRAVITY (WATER=1) 2.79 gm/cc @ 20°C	% VOLATILE BY VOLUME N/A
APPEARANCE AND ODOR Light green powder, odorless		EVAPORATION RATE N/A

SECTION IV - FIRE AND EXPLOSIVE DATA

FLASH POINT (METHOD USED)	FLAMMABLE LIMITS	LEL	UEL
Non-flammable	N/A		

EXTINGUISHING MEDIA
Dry chemical, CO_2, water spray

SPECIAL FIRE FIGHTING PROCEDURES
Not a fire hazard, wear self-contained breathing apparatus when large quantities are involved.

UNUSUAL FIRE AND EXPLOSION HAZARDS
None expected.

SECTION V - HEALTH HAZARD DATA

OCCUPATIONAL EXPOSURE LIMITS
See Section II

EFFECT OF OVEREXPOSURE

Eye - May cause irritation.

Skin - Skin contact may cause allergic dermatitis (Nickel itch or rash).

Inhalation - Inhalation of concentrations above the Occupational Exposure Limits may cause upper respiratory tract irritation. NIOSH has concluded that Nickel and certain Nickel compounds are suspected carcinogens. For detail see Section IX - Additional Information.

Ingestion - Low order of acute toxicity. May cause gastro-intestinal disorders.

EMERGENCY AND FIRST AID PROCEDURES

Eye contact - Irrigate with water at least 15 minutes. Consult physician.

Skin contact - Remove contaminated clothing. Wash skin thoroughly with soap and water. Consult physician.

Inhalation - Remove to fresh air. May give oxygen. Consult physician.

Accidental ingestion - Induce vomiting if conscious. Consult physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE	CONDITIONS TO AVOID N/A
	STABLE - STABLE UNDER NORMAL TEMPERATURE AND PRESSURE	

INCOMPATIBILITY (MATERIALS TO AVOID)
None expected

HAZARD DECOMPOSITION PRODUCTS
Toxic fumes and metal oxides may be present during decomposition.

HAZARDOUS POLYMERIZATION	MAY OCCUR	CONDITIONS TO AVOID N/A
	WILL NOT OCCUR Not known to occur.	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Contain the spill. Pick up the spill in an approved container for disposal. Flush area with water.

WASTE DISPOSAL METHOD
Dispose in accordance with Federal, State and Local laws.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFIC TYPE)
Use NIOSH approved respiratory protection where airborne level exceeds appropriate occupational exposure limit

VENTILATION	LOCAL EXHAUST	X	SPECIAL	
	MECHANICAL (GENERAL)	X	OTHER	Adequate to maintain below exposure limit.

PROTECTIVE GLOVES Wear rubber gloves to avoid skin contact.	EYE PROTECTION Wear goggles where eye contact may occur.

OTHER PROTECTIVE EQUIPMENT
Wear protective coverall as appropriate to avoid skin contact. Safety showers and eyewash stations should be present in work area.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTION TO BE TAKEN IN HANDLING AND STORING
Keep container closed. Protect against physical damage. Avoid contact with skin, eyes and clothing.

OTHER PRECAUTIONS
Avoid breathing and use only with adequate ventilation. Wash thoroughly after handling. No food or beverage should be consumed in work area.

ADDITIONAL INFORMATION
According to OSHA CFR 29 Part 1910-1200 (Hazard Communication) Nickel and certain Nickel compounds are deemed to be possible cancer hazards. This is based on assessment by the U.S. NTP (National Toxicology Program) that they may reasonably be anticipated to be carcinogens and an assessment of IARC (International Agency of Research on Cancer) which concluded that there was sufficient evidence that nickel and nickel compounds, as a group but not necessarily as individual chemicals, were carcinogenic to humans. IARC could not state with certainty which specific nickel compounds are human carcinogens and which are not.

Toxicity data - Scu-Gpg (Subcutanious-Guinea Pig) LDL_0 32 mg/kg, LDL_0 = Lowest published lethal dose.

ABOVE DATA REFERENCE - REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES 1981-82.

This product contains the "NICKEL COMPOUNDS" toxic chemical subject to the reporting requirements of Superfund Amendment and Reauthorization Act (SARA) of 1986, Section 313 of the Emergency Planning and Community Right to Know Act and of 40 CFR, Part 372.

This substance is listed on the Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

NFPA Hazard Ratings: HEALTH 2, FIRE 0, REACTIVITY 0

Canada W.H.M.I.S. Classification - D2A