



The Hall Chemical Company

Material Safety Data Sheet

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 Cobalt Carbonate Feed Grade (46% Cobalt)		TRADE NAMES AND SYNONYMS Cobalt Carbonate Feed Grade	
HAZARDOUS MATERIAL DESCRIPTION & PROPER SHIPPING NAME (49CFR172.101) N/A		HAZARD CLASS (49CFR 172.101) N/A	
CHEMICAL FAMILY Inorganic Metallic Salt		FORMULA CoCO ₃	
DATE THIS FORM PREPARED September 1, 1990	PREPARED BY J. GANDHI	CAS NUMBER 513-79 for Cobalt Carbonate and 3333-67-3 for Nickel Carbonate	

SECTION II - HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	OCCUPATIONAL EXPOSURE LIMITS		
Contains approximately 46% Cobalt as Cobalt Carbonate and 0.0 to 0.10% Ni as Nickel Carbonate	OSHA PEL		ACGIH TWA (1989-90)
	Co Carbonate Ni Carbonate	Not established 1.0 mg/m ³ as Ni	No specific TLV established 1.0 mg/m ³ as Ni

SECTION III - PHYSICAL DATA

BOILING POINT (°F) Decomposes	VAPOR PRESSURE (mm HG) N/A	VAPOR DENSITY (AIR=1) N/A
SOLUBILITY IN WATER Insoluble	SPECIFIC GRAVITY (WATER=1) 4.13 gm/cc @ 25°C	% VOLATILE BY VOLUME N/A
APPEARANCE AND ODOR Pink powder, odorless	EVAPORATION RATE N/A	

SECTION IV - FIRE AND EXPLOSIVE DATA

FLASH POINT (METHOD USED) Non-flammable	FLAMMABLE LIMITS N/A	LEL	UEL
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 In contact with easily oxidizable substances, it may react to cause ignition.			

SECTION V - HEALTH HAZARD DATA

OCCUPATIONAL EXPOSURE LIMITS See Section II	
EFFECT OF OVEREXPOSURE	
Eye	- May cause irritation.
Skin	- May cause local dermatitis which is relieved when removed. May cause allergic dermatitis.
Inhalation	- May cause irritation to upper respiratory tract. May cause allergic response in some individuals with asthma. This product contains Nickel in excess of 0.1% as Nickel Carbonate. According to Hazard Communication Standard, compounds containing in excess of 0.1% Nickel are to be labeled as potential carcinogens. For detail, see Section IX - Additional Information.
Ingestion	- Toxicity due to ingestion is low.
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	N/A
	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

Chronic pulmonary disease has been reported in workers in the cemented tungsten carbide industry where cobalt is used. This effect has not been reported in workers refining or using cobalt metal, cobalt oxide and other compounds of cobalt.

Toxicity data - 1pr Rat - LD₅₀ 2002 mg/kg, 1pr = Intraperitoneal, LD₅₀ = Lowest published lethal dose.

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

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 for 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.

NOTE: The Cobalt Carbonate Feed Grade (46% Cobalt) is regulated by the FDA (Food and Drug Administration).

This product contains the "COBALT COMPOUNDS and 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

Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of the knowledge and belief of The Hall Chemical Co., but is not guaranteed to be so. The Company makes no representations or warranties, express or implied. Customers are encouraged to conduct their own tests.