



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 Sulfate Monohydrate	TRADE NAMES AND SYNONYMS Cobalt Sulfate Monohydrate	
HAZARDOUS MATERIAL DESCRIPTION & PROPER SHIPPING NAME (49CFR172.101) N/A	HAZARD CLASS (49CFR 172.101) N/A	
CHEMICAL FAMILY Inorganic Metallic Salt	FORMULA CoSO ₄ ·H ₂ O	
DATE THIS FORM PREPARED September 1, 1990	PREPARED BY J. GANDHI	CAS NUMBER 10124-43-3

SECTION II - HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	OCCUPATIONAL EXPOSURE LIMITS	
	OSHA PEL	ACGIH TWA (1989-90)
Cobalt Sulfate Monohydrate Contains approx. 33% Cobalt as Cobalt Sulfate Monohydrate	No specific PEL established	No specific TLV established

SECTION III - PHYSICAL DATA

BOILING POINT (°F) Decomposes @1355°F	VAPOR PRESSURE (mm HG) N/A	VAPOR DENSITY (AIR=1) N/A
SOLUBILITY IN WATER 36 grams/100 grams	SPECIFIC GRAVITY (WATER=1) 3.71 gm/cc @ 25°C	% VOLATILE BY VOLUME N/A
APPEARANCE AND ODOR Red or rose crystal, odorless	EVAPORATION RATE N/A	

SECTION IV - FIRE AND EXPLOSIVE DATA

FLASH POINT (METHOD USED) Non-flammable	FLAMMABLE LIMITS N/A	LEL	UEL
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EXTINGUISHING MEDIA
Dry chemical, CO₂, 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 - 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.
- 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.

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.				

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 - Oral rat LD₅₀ 424 mg/kg, Oral rabbit LD₅₀ 1800 mg/kg
 LD₅₀ = Lowest Published Lethal Dose, that dose most likely to cause death of 50% of experimental animals.
 LD₁₀ = Lowest published dose.

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

This product contains the "COBALT 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 1, 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.