Kurt J. Lesker Company MATERIAL SAFETY DATA SHEET

COBALT

Section I

Kurt J. Lesker Company 1925 Worthington Avenue Clairton, PA 15025 Ph: 412/387-9200 Fax: 412/233-4275	Emergency Phone Numbers KJLC 800/245-1656 Chemtrec 800/424-9300 Poison Center 800/562-8236

Chemical Name and Synonyms **Cobalt**	Date of Last Revision 9/92

Formula Co	Chemical Family Metal	Chemical Abstract No. 7440-48-4

TSCA Listed in the TSCA inventory	Calc. Molecular Wt. 58.9

Section II Hazardous Ingredients

Hazardous Ingredients	CAS #	%	TLV	OSHA PEL
Cobalt	7440-48-4	99.8	.05mg/m^3	.01/mg/m^3

Section III Physical Data

Boiling Point (0°C): 2900°C	Density (gmcc): 8.92
Vapor Pressure: NA	% Volatile by Volume: NA
Reaction with Water: None	Evaporation Rate (H_2O -1): NA
Solubility in Water: Insoluble	Melting Point (°C): 1495°C
Appearance and Odor: Metallic grey powder or pieced. Odorless	Other Comments: Reacts slowly with dilute HCl and H_2SO_4. Readily soluble in HNO_3

Section IV Fire & Explosion Hazard Data

Flash Point (method)	Autoignition Temp.	Flammability	LEI	UEI
NA	NA	Nonflammable**	NA	NA

Extinguishing Media: Use agents for metal fires such as dry powder (graphite), CO_2, foam, or water.**

Special Fire Fighting Procedures: ** Do not use water on fires involving extremely fine cobalt powder. Use carbon dioxide or foam as extinguishing media.

Unusual Fire and Explosion Hazards: ** Extremely fine cobalt powder (smaller than 3 micron particle size) is combustible and can form an explosive mixture with air. Larger particle sized cobalt powder does not present a fire or explosion hazard.

Section V Spill or Leak Process

Steps to be Taken in Case Material is Released or Spilled: Approved respiratory equipment should be worn during the clean-up of powder spills. Also wear protective equipment such as gloves and coveralls to prevent skin contact. Collect spills by (1) wet sweeping, (2) dry sweeping using sweeping compound, or (3) by vacuuming using vacuum cleaner equipped with a HEPA filter. Salvage spilled material profitably for reuse locally or contact the local authority for guidance on waste disposal methods.

Waste Disposal Method (Consult federal, state or local authorities for proper disposal procedures.): Dispose of in compliance with all current local, state and federal regulations.

ND = NO DATA FOUND NA = NOT APPLICABLE

Section VI Health Hazard Data

Toxicity Data ND	HMIS Hazard Rating Health: 2 Flammability: 1 Reactivity: 0 Personal Protection: F

Route(s) of Entry Inhalation: X Skin:X Ingestion: X
Effects of Overexposure (acute and chronic) Inhalation: Prolonged inhalation of Cobalt dust, or metal dust, fume or mist containing Cobalt may cause serious respiratory illness. there are references in the literature associating Cobalt with interstitial fibrosis, a disease which can be fatal. Inhalation may cause an irritation of respirator organs of sensitive persons. Dermal/Eye Contact: Resulting in obstruction of airways with shortness of breath. May cause eye irritation. Single prolonged contact is essentially nonirritating. Repeated exposure may cause allergic dermatitis, usually occurring in skin areas subject to friction. Other (specify): Amounts ingested incidental to industrial handling are not likely to cause injury. Single dose oral toxicity is low. Ingestion of significant amounts of Cobalt has been reported to have the potential for causing blood, heart, thyroid and pancreas damage.
Medical Conditions Generally Aggravated by Exposure: Allergic or hypersensitive persons may develop a skin reaction or obstructive lung disease.
Carcinogenicity: None NTP: No IARC Monographs: No OSHA Regulations: No
Emergency and First Aid Procedures Ingestion: Induce vomiting if large amounts are ingested. Consult a doctor. Inhalation: Remove individual from exposure to fresh air. If necessary, give oxygen. Seek medical attention if breathing complications arise. Skin Contact: Wash thoroughly with soap and clear water. If irritation persists seek medical attention. Eye Contact: Irrigate with water for at least 15 minutes. If irritation persists seek medical attention.

Section VII Reactivity Data

Stable: X Unstable:	Conditions Contributing to Instability: None known
Incompatibility (materials to avoid): Strong acids, strong oxidizers, acetylene, hydrazinium nitrate, ammonium nitrate, bromine-pentafluoride	
Hazardous Decomposition Products - Thermal and Other (list): None known	
Hazardous Polymerization May Occur: Will Not Occur:X	Conditions to Avoid: None known

Section VIII Special Protective Information

Respiratory Protection (specify type). Use Only Niosh Approved Equip. NIOSH approved dust respirator is required.

Ventilation (always maintain exposure below permissible limits)
Local Exhaust: Maintain exposure limits below PEL and TLV
Mechanical (general): Adequate ventilation
Special: Other:

Protective Gloves: Required	Eye Protection: Safety glasses

Other Protective Equipment/Work Practices: Synthetic apron required to prevent skin contact. Safety showers and eye washes should be present within work area.

Section IX Special Precautions

Precautions to be Taken in Handling and Storing: Keep material in closed containers. Do not store near mineral acids. Use good housecleaning practices to prevent accumulation of dust and follow cleaning procedures (vacuuming and wet sweeping) that will keep airborne particulates at a minimum. Do not breath dust. Wash shower thoroughly after handling.

Transportation Requirements
DOT Class: Not classified UN Number: Not classified
IMCO Class: Not classified Other: