

Material Safety Data Sheet
 May be used to comply with
 OSHA's Hazard Communication Standard,
 29 CFR 1910.1200. Standard must be
 consulted for specific requirements.

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form approved
 OMB No. 1218-0072



IDENTITY (As Used on Label and List)
 GROUP V SOLDERS (see pages 3 & 4)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name KROHN INDUSTRIES, INC.	Emergency Telephone Number (201) 933-9696
Address (Number, Street, City, State, and ZIP Code) 303 VETERANS BOULEVARD	Telephone Number for Information (201) 933-9696
CARLSTADT, NEW JERSEY 07072	Date Prepared FEBRUARY 13, 2006 (Revised date)
	Signature of Preparer (optional)

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
SILVER (Ag) CAS #7440-22-4		0.1mg/m³		
COPPER (Cu) CAS #7440-50-8		0.2mg/m³ (as fume)		
ZINC (Zn) CAS #7440-66-6		5.0mg/m³ (as zinc oxide fume)		
CADMIUM (Cd) CAS #7440-43-9		0.05C*mg/m³ (as cadmium oxide fume)		

* "C" Denotes "Ceiling Limit" not to be exceeded at any time.

Section III — Physical/Chemical Characteristics

Bolling Point	N/A	Specify Gravity (H ₂ O = 1)	N/A
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A

Solubility in Water
 N/A

Appearance and Odor
METALLIC - ROD, STRIP, WIRE OR POWDER. ODORLESS.

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL N/A	UEL N/A
Extinguishing Media N/A			
Special Fire Fighting Procedures N/A			

Unusual Fire and Explosion Hazards
 NONE.

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	STABLE AT ROOM TEMPERATURE.

Incompatibility (Materials to Avoid)
NONE KNOWN.

Hazardous Decomposition or Byproducts
Cu FUMES, Zn OXIDE, Ag METAL MAY BE GENERATED DURING BRAZING. AVOID OVERHEATING.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? YES Skin? YES Ingestion? YES

Health Hazards (Acute and Chronic)
MAJOR CONCERNS OF A Ag, Zn, Cu SYSTEM THROUGH FUME AND DUST INHALATION ARE "BRASS CHILLS" IRRITATION OF THE RESPIRATORY TRACT, NAUSA, AND IN SOME CASES MAY CAUSE DISCOLORATION OF THE SKIN AND HAIR.

Carcinogenicity: NTP? NO IARC Monographs? NO OSHA Regulated? NO

Signs and Symptoms of Exposure
FEVER, CHILLS, IRRITATION OF THE RESPIRATORY TRACT, NAUSA AND IN SOME CASES MAY CAUSE DISCOLORATION OF THE SKIN AND HAIR.

Medical Conditions Generally Aggravated by Exposure
RESPIRATORY CONDITIONS.

Emergency and First Aid Procedures
IF DUST OR FUMES GETS INTO EYES, IRRIGATE IMMEDIATELY. IF A PERSON BREATHES IN LARGE AMOUNTS OF DUSTS OR FUMES, MOVE THE EXPOSED PERSON TO FRESH AIR AT ONCE AND PERFORM ARTIFICIAL RESPIRATION. IF SWALLOWED, GET MEDICAL ATTENTION IMMEDIATELY. GIVE LARGE QUANTITIES OF WATER AND INDUCE VOMITING. DO NOT MAKE AN UNCONSCIOUS PERSON VOMIT.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
NO PROBLEM IN PICKING UP WIRE, ROD, OR STRIP FORMS OF THE ALLOY, FOR USE, RECLAIM OR SCRAP.

Waste Disposal Method
CONSIDER POSSIBLE RECLAIM VALUE. SCRAP ALLOY CAN BE DISPOSED OF THROUGH A LICENSED WASTE DISPOSAL COMPANY, IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATION THE DISPOSAL OF COLLECTED FUMES, (SEE SECTION VIII) FROM THE EXHAUST VENTILATION SYSTEM MUST BE CONSIDERED ALSO.

Precautions to Be Taken in Handling and Storing
NONE KNOWN.

Other Precautions
NONE KNOWN.

Section VIII — Control Measures

Respiratory Protection (Specify Type)
IN CONFINED SPACE USE AN AIRLINE RESPIRATOR OR HOSE MASK. NIOSH, U.S. BUREAU OF MINES APPROVED HOSE TYPE C OR SELF-CONTAINED AIR RESPIRATOR.

Ventilation FOR FUMES & GASES	Local Exhaust AIR FLOW TO PRODUCE VELOCITY OF 100 LINEAR FT/MIN IN BRAZING ZONE	Special SEE FOOTNOTE
	Mechanical (General) 2000 CU FT/MIN/BRAZER	Other SEE FOOTNOTE

Protective Gloves
LEATHER WELDING GLOVES

Other Protective Clothing or Equipment
NORMAL CLOTHING FOR TORCH BRAZING.

Work/Hygiene Practices
LAUNDRY SOILED CLOTHING BEFORE REUSE. WASH THOROUGHLY WITH SOAP AND WATER AFTER USE.

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	STABLE AT ROOM TEMPERATURE.
Incompatibility (Materials to Avoid) N/A			
Hazardous Decomposition or Byproducts AVOID OVERHEATING (ABOVE 1350 F) - SILVER, COPPER FUMES, ZINC OXIDE FUMES AND CADMIUM OXIDE FUMES ARE EVOLVED DURING BRAZING (SEE SECTION II).			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	N/A

Section VI — Health Hazard Data

Route(s) of Entry:	Inhalation?	YES	Skin?	YES	Ingestion?	YES
Health Hazards (Acute and Chronic) CADMIUM FUME INHALATION CAUSES PULMONARY DISTURBANCES, WEAKNESS, AND LEG PAIN, PROGRESSING TO FEVER AND LUNG CONGESTION. CHRONIC INHALATION PRODUCES ANSOMIA, DYSPNEA, WEIGHT LOSS, AND YELLOW DISCOLORATION OF THE TEETH. IRREVERSIBLE LUNG INJURY HAS RESULTED, AS HAS KIDNEY DAMAGE. HYPERTENSION HAS RECENTLY BEEN REPORTED. OVEREXPOSURE TO ZIN OXIDE FUMES CAN CAUSE NAUSEA AND "BRASS CHILLS".						
Carcinogenicity:	NTP?	YES	IARC Monographs?		OSHA Regulated?	
CADMIUM AND CERTAIN COMPOUNDS ARE LISTED BY THE NATIONAL TOXICOLOGY PROGRAM AS SUBSTANCES "THAT MAY BE REASONABLY ANTICIPATED TO BE CARCINOGENS" (EVIDENCE IN HUMANS IS LIMITED: EVIDENCE IN EXPERIMENTAL ANIMALS IS SUFFICIENT.)						
Signs and Symptoms of Exposure PULMONARY DISTURBANCES, WEAKNESS, LEG PAIN, FEVER, NAUSEA AND LUNG CONGESTI						
Medical Conditions Generally Aggravated by Exposure POSSIBLE AGGRAVATION OF PULMONARY CONDITIONS AND HYPERTENSION.						

Emergency and First Aid Procedures REMOVE VICTIM FROM CONTAMINATED AREA. ADMINISTER OXYGEN. CALL A DOCTOR. GIVE ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED. SEE FOOTNOTE.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled NO PROBLEM IN PICKING UP WIRE, ROD, OR STRIP FORMS OF THE ALLOY, FOR USE, RECLAIM OR SCRAP.

Waste Disposal Method: CONSIDER POSSIBLE RECLAIM VALUE. SCRAP ALLOY CAN BE DISPOSED OF THROUGH A LICENSED WASTE DISPOSAL COMPANY, IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. THE DISPOSAL OF COLLECTED FUMES, (SEE SECTION VIII) FROM THE EXHAUST VENTILATION SYSTEM MUST BE CONSIDERED ALSO.

Precautions to Be Taken in Handling and Storing NONE.

Other Precautions NONE KNOWN.

Section VIII — Control Measures

Respiratory Protection (Specify, Type) IN CONFINED SPACE USE AN AIRLINE RESPIRATOR OR HOSE MASK. NIOSH, U.S. BUREAU OF MINES APPROVED HOSE TYPE C OR SELF-CONTAINED AIR RESPIRATOR.

Ventilation FOR FUMES & GASES	Local Exhaust AIR FLOW TO PRODUCE VELOCITY OF 100 LINEAR FT/MIN IN BRAZING ZONE	Special SEE FOOTNOTE
	Mechanical (General) 2000 CU FT/MIN/BRAZER	Other SEE FOOTNOTE

Protective Gloves LEATHER WELDING GLOVES

Eye Protection PLASTIC FRAME SAFETY GLASSES WITH SID SHIELDS FILTER LENSES (SHADE 3 & 4)

Other Protective Clothing or Equipment NORMAL CLOTHING FOR TORCH BRAZING

Work/Hygienic Practices LAUNDRER SOILED CLOTHING BEFORE REUSE. WASH THOROUGHLY WITH SOAP AND WATER AFTER USE.

[FR Doc. 85-28201 Filed 11-25-85; 8:45 am] BILLING CODE 4510-26-C

FOOTNOTE- REFER TO "OSHA STANDARD 29 CFR 1910 FROM THE U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON D.C. 20402 AND ANSI STAND 249.1 - SAFETY IN THE WELDING & CUTTING", PUBLISHED BY THE AMERIC WELDING SOCIETY, P.O. BOX 351040, MIAMI, FL 33135