

# SAFETY DATA SHEET

Date Issued : 5/11/2012  
MSDS No : M-2710-030

## Nickel-Chromium Alloy Pieces

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Nickel-Chromium Alloy Pieces  
**GENERAL USE:** Physical vapor deposition of thin films

#### MANUFACTURER

Kurt J Lesker Company  
United States  
1925 Route 51  
Jefferson Hills, PA 15025  
**Customer Service:** 412-387-9200  
**E-Mail:** msds@lesker.com  
Kurt J Lesker Company LTD  
United Kingdom  
15-16 Burgess Road  
Hastings, East Sussex, TN35 4NR  
England  
**Customer Service:** +44 (0) 1424 458100

#### 24 HR. EMERGENCY TELEPHONE NUMBERS

24-Hour Emergency Response provided by  
3E Global Incident Response Hotline

When calling, refer to Kurt J Lesker Company  
Global Response Access Code: 333594

North America [USA, Canada, Mexico]: 1-866-519-4752  
Mainland China: (+86) 4001 2001 74  
Europe: {int'l call prefix}-1-760-476-3961  
Asia Pacific: {int'l call prefix}-1-760-476-3960  
Middle East & Africa: {int'l call prefix}-1-760-476-3959

### 2. HAZARDS IDENTIFICATION

#### GHS CLASSIFICATIONS

##### Health:

Target Organ Toxicity (Repeated exposure), Category 1  
Skin Sensitization, Category 1  
Carcinogenicity, Category 2

#### GHS LABEL



Health  
hazard



Exclamation  
mark

#### HAZARD STATEMENTS

H372: Causes damage to organs through prolonged or repeated exposure .  
H351: Suspected of causing cancer .  
H317: May cause an allergic skin reaction.

#### PRECAUTIONARY STATEMENT(S)

##### Prevention:

P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P314: Get medical advice/attention if you feel unwell.

#### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** Silvery-white metal

**IMMEDIATE CONCERNS:** Negligible fire or explosion hazard in bulk form. Powdered material may form explosive dust-air mixtures.

#### POTENTIAL HEALTH EFFECTS

**EYES:** Contact may cause eye irritation.

**SKIN:** May cause skin irritation. Allergic reactions are possible.

**INGESTION:** May be harmful if swallowed.

**INHALATION:** May be harmful if inhaled. May cause respiratory irritation.

#### REPRODUCTIVE TOXICITY

**REPRODUCTIVE EFFECTS:** Not Available

**TERATOGENIC EFFECTS:** Not Available

**CARCINOGENICITY:** IARC Group 2B - Possibly carcinogenic to humans.

**MUTAGENICITY:** Not Available

**MEDICAL CONDITIONS AGGRAVATED:** None expected.

**ROUTES OF ENTRY:** Inhalation, ingestion, eye contact, or skin contact.

**TARGET ORGAN STATEMENT:** Lungs, Respiratory tract

**IRRITANCY:** May cause irritation of skin, eyes, and respiratory tract.

**SENSITIZATION:** May cause skin sensitization, an allergic reaction, which becomes evident on re exposure to this material.

**PHYSICAL HAZARDS:** This substance is not considered hazardous in the form supplied. Dusts at sufficient concentrations can form explosive mixtures with air.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Nickel	0 - 100	7440-02-0
Chromium	0 - 100	7440-47-3

### 4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

**SKIN:** Wash with soap and water. Get medical attention if irritation develops or persists.

**INGESTION:** Rinse mouth. Get medical advice/attention.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

#### SIGNS AND SYMPTOMS OF OVEREXPOSURE

**ACUTE TOXICITY:** May cause skin irritation. Allergic reactions are possible.

**CHRONIC EFFECTS:** Not Available

### 5. FIRE FIGHTING MEASURES

**FLAMMABLE CLASS:** Noncombustible except as a powder.

**EXTINGUISHING MEDIA:** Use a Class D dry powder extinguisher, dolomite, dry sand, graphite, or soda ash.

**EXPLOSION HAZARDS:** Dusts at sufficient concentrations can form explosive mixtures with air.

**FIRE FIGHTING PROCEDURES:** As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Toxic metal fumes

## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Clean up spills immediately, observing precautions in Protective Equipment section.

**LARGE SPILL:** Collect spilled material in appropriate container. Spill may be reportable . Consult section 15 for Reportable Quantities.

### ENVIRONMENTAL PRECAUTIONS

**WATER SPILL:** This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

**GENERAL PROCEDURES:** Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Eliminate all ignition sources if safe to do so. Avoid formation of dust. Provide appropriate exhaust ventilation where dust is formed. Avoid breathing (dust, vapor, mist, gas). Practice good chemical hygiene during and after use. Avoid release to the environment.

## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** To avoid risks to human health and the environment, comply with the instructions for use.

**HANDLING:** Keep away from heat and flame. Keep container closed when not in use. Remove contaminated clothing and wash before reuse. Wash hands before eating and wash before reuse. Wash thoroughly after handling.

**STORAGE:** Keep container closed when not in use. Store in a cool dry place.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear safety glasses with side shields (or goggles) and a face shield.

**SKIN:** Wear protective gloves/protective clothing/eye protection/face protection. Wash contaminated clothing before reuse.

**RESPIRATORY:** Not normally needed. If ventilation is inadequate and this material is handled at elevated temperatures or dusts/fumes/mists are generated a NIOSH/MSHA approved air purifying respirator with a manufacturers approved cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

**WORK HYGIENIC PRACTICES:** Practice good chemical hygiene during and after use.

### COMMENTS:

COMPONENT EXPOSURE LIMITS

Component	Location, Type	Value (mg/m3)
Nickel	ACGIH TLV TWA	1.5
	OSHA OEL TWA	1
	NIOSH REL TWA	0.015
	Canada TWA	1
	Canada - British Columbia TWA	0.05
	Austria, Denmark, Norway TWA	0.05
	Germany, Sweden TWA	0.5
	Aus, Japan, NZ, Singapore TWA	1
	UK MEL	0.5

Component	Location, Type	Value (mg/m3)
Chromium	ACGIH TLV TWA	0.5
	OSHA OEL TWA	1
	NIOSH REL TWA	0.5
	Canada - AB, BC, ON, PQ TWA	0.5
	Europe TWA	0.5
	Hungary TWA	2
	UK WEL TWA	0.5

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Solid

**ODOR:** None

**COLOR:** Silver-white

**pH:** NA = Not Applicable

**PERCENT VOLATILE:** NA = Not Applicable

**FLASH POINT AND METHOD:** NA = Not Applicable

**FLAMMABLE LIMITS:** NA = Not Applicable

**AUTOIGNITION TEMPERATURE:** NA = Not Applicable

**VAPOR PRESSURE:** Extremely low at 25C

**VAPOR DENSITY:** NA = Not Applicable

**BOILING POINT:** Not Available

**MELTING POINT:** Not Available

**SOLUBILITY IN WATER:** Insoluble

**DENSITY:** Not Available

## 10. STABILITY AND REACTIVITY

**STABLE:** Yes

**HAZARDOUS POLYMERIZATION:** No

**HAZARDOUS DECOMPOSITION PRODUCTS:** Toxic metal fumes

**INCOMPATIBLE MATERIALS:** Strong acids, Oxidizing materials, Aluminum, Methanol, Selenium, Ammonium Nitrate, Sulphur compounds.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE

**EYES:** May cause mild transient irritation but there is no evidence of long term harmful effects from available information.

**DERMAL LD<sub>50</sub>:** Not Available

**SKIN ABSORPTION:** Not Available

**ORAL LD<sub>50</sub>:** Not Available

**INHALATION LC<sub>50</sub>:** Not Available

**SKIN EFFECTS:** May cause an allergic skin reaction.

### CARCINOGENICITY

**IARC:** Group 2B - Possibly carcinogenic to humans.

**NTP:** Reasonably anticipated to be a human carcinogen.

**OSHA:** Listed

**SENSITIZATION:** May cause skin sensitization.

**REPRODUCTIVE EFFECTS:** Not Available

**TARGET ORGANS:** Lungs, Respiratory tract

**TERATOGENIC EFFECTS:** Not Available

**MUTAGENICITY:** Not Available

## 12. ECOLOGICAL INFORMATION

**BIOACCUMULATION/ACCUMULATION:** Not Available

### AQUATIC TOXICITY (ACUTE)

**96-HOUR LC<sub>50</sub>:** .06 mg/L (Oncorhynchus mykiss)

**48-HOUR EC<sub>50</sub>:** 1 mg/L (Daphnia magna)

**CHEMICAL FATE INFORMATION:** Not Available

**COMMENTS:** The preceding data is for nickel.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Dispose of according to applicable federal, state, provincial, and local regulations.

**PRODUCT DISPOSAL:** Material may be recyclable.

**EMPTY CONTAINER:** Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

## 14. TRANSPORT INFORMATION

**DOT (DEPARTMENT OF TRANSPORTATION)****PRIMARY HAZARD CLASS/DIVISION:** Not Regulated**ROAD AND RAIL (ADR/RID)****PROPER SHIPPING NAME:** Not Regulated**AIR (ICAO/IATA)****PRIMARY HAZARD CLASS/DIVISION:** Not Regulated**VESSEL (IMO/IMDG)****PRIMARY HAZARD CLASS/DIVISION:** Not Regulated**CANADA TRANSPORT OF DANGEROUS GOODS****PRIMARY HAZARD CLASS/DIVISION:** Not Regulated**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)****311/312 HAZARD CATEGORIES:** Chronic health hazard.**TSCA (TOXIC SUBSTANCE CONTROL ACT)****TSCA STATUS:** All components of this product are included in inventory, exempt, or notified**REGULATIONS****STATE REGULATIONS:**

The following components appear in one or more of the following state hazardous substances lists

Component	CAS	CA	MA	MN	NJ	PA	RI
Chromium	7440-47-3	Yes	Yes	Yes	Yes	Yes	Yes
Nickel	7440-02-0	Yes	Yes	Yes	Yes	Yes	Yes

**CALIFORNIA PROPOSITION 65:** This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm and may be subject to the requirements of California Proposition 65 (CA Health and Safety Code section 25249.5) : Nickel

**CANADA****WHMIS HAZARD SYMBOL AND CLASSIFICATION**

Toxic

D2A

D2B

**DOMESTIC SUBSTANCE LIST (INVENTORY):** All components of this product are included in inventory, exempt, or notified

**16. OTHER INFORMATION**

**APPROVED BY:** EHS DEPT

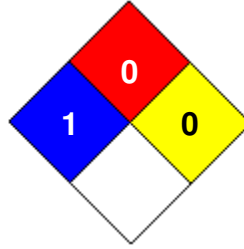
**PREPARED BY:** E Bolton

**INFORMATION CONTACT:** msds@lesker.com

**HMIS RATING**

<b>HEALTH</b>	*	<b>2</b>
<b>FLAMMABILITY</b>		<b>0</b>
<b>PHYSICAL HAZARD</b>		<b>0</b>
<b>PERSONAL PROTECTION</b>		<b>F</b>

**NFPA CODES**



**MANUFACTURER DISCLAIMER:**

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