SECTION 1 : Chemical Product and Company Identification

MSDS Name: Gold metal, powder and pieces
Manufacturer Name: Kurt J. Lesker Company
Address:
P.O. Box 10
1925 Route 51
Clairton, PA 15025

For emergencies in the US, call CHEMTREC: 800-424-9300
Other Phone: US National Poison Hotline: (800)222-1222
Manufacturer MSDS Creation Date:
06/27/2006
Manufacturer MSDS Revision Date:
06/25/2008

Synonyms:
Gold metal; burnish gold; colloidal gold; gold flake; gold leaf; gold powder; magnesium gold purple; shell gold.

Chemical Family: Metal
Chemical Formula: Au
Molecular Weight: 196.97

DOT HAZARD LABEL
No data.

Product Codes:
Au

SECTION 2 : Hazardous Ingredients/Identity Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>% Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold metal</td>
<td>7440-57-5</td>
<td>0.0-100.0%</td>
</tr>
<tr>
<td>See SECTION 16-Other Information</td>
<td>NA</td>
<td>0.0-100.0%</td>
</tr>
</tbody>
</table>

SECTION 3 : Physical And Chemical Characteristics

Physical State/Appearance:
Yellow, ductile metal or powder, no odor.

Physical State:
[ ] Gas, [ ] Liquid, [ X ] Solid

pH:
No data.

Vapor Pressure:
1 mm at 1869.0 C (3396.2 F) (VS. AIR OR MM HG)

Vapor Density:
No data. (VS. AIR = 1)

Boiling Point:
2700.00 deg C (4892.0 deg F) to 3080.00

Melting Point:
1064.40 deg C (1947.9 deg F)

Solubility In Water:
insoluble
Specific Gravity:
19.3 g/cc (WATER = 1)

Density:
No data.

Evaporation Point:
No data. (VS BUTYL ACETATE=1)

Percent Volatile:
N.A.

Flash Point:
N.A.

Upper Flammable Explosive Limit:
NA

Lower Flammable Explosive Limit:
NA

SECTION 4 : Fire And Explosion Hazards

Flash Point:
N.A.

Flash Point Method:
No data.

Upper Flammable or Explosive Limit: NA

Lower Flammable or Explosive Limit: NA

Extinguishing Media:
Not applicable. Use suitable extinguishing media for surrounding materials and type of fire.

Fire Fighting Instructions:
Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire Hazards:
Extremely inactive; not attacked by acids, air or oxygen. Superficially attacked by aqueous halogen at room temperature. React with aqua regia, with mixtures containing chlorides, bromides, or iodides if they can generate nascent halogens. Reacts with many oxidizing mixtures especially those containing halogens. Reacts with alkali cyanides, solutions of thiocyanates and double cyanides. Does not corrode in air but is tarnished by sulfur. Finely divided gold with hydrogen peroxide may explode.

SECTION 5 : Health Hazards

Applies to All Ingredients:

Route of Exposure:
Inhalation? No , Skin? No , Eyes? No , Ingestion? No , Other: N

Potential Health Effects:

Eye Contact:
May cause irritation.

Skin Contact:
May cause abrasive irritation. May cause an allergic reaction.

Inhalation:
May cause irritation to mucous membranes.

Ingestion:
May cause gastrointestinal tract irritation.

Chronic Eye Contact:
May cause conjunctivitis.

Chronic Skin Contact:
May cause dermatitis.

Chronic Inhalation:
Long exposure time may cause dyspnea, hyperventilation on exertion, cough, sputum and chronic bronchitis.
Chronic Ingestion:
No chronic health effects recorded.

Carcinogenicity:
NTP? No , IARC Monographs? No , OSHA Regulated? No

Target Organs:
No target organs recorded.

Signs/Symptoms:
INHALATION: May cause a red, dry throat, sneezing and difficulty breathing. INGESTION: May cause nausea and vomiting. SKIN: May cause redness, dryness and itching. EYE: May cause redness, burning, inflammation and watering.

Other Potential Health Effects:
CARCINOGENICITY/OTHER INFORMATION: Questionable carcinogen with experimental tumorigenic data by implantation.

Aggravation of Pre-Existing Conditions:
None recorded.

See "Section II" LD 50/LC 50: Not Established

SECTION 6 : Emergency And First Aid Procedures

Physical Health Hazard:
HEALTH HAZARDS (ACUTE AND CHRONIC): Gold poisoning is rare. The few recorded cases of fatalities are the result of therapeutic overdose. Human systemic effects are similar to those of arsenic exposure and include: violent diarrhea, gastritis, colitis, dermatitis, blood dyscrasias, leukopenia, anagaloysis and a plastic anemia. The therapeutic use of gold compounds has been associated with serious effects at the kidney, liver, and other vital organs. Generally, gold compounds are poorly absorbed when ingested. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Eye Contact:
Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

Skin Contact:
Remove contaminated clothing; brush material off skin; wash affected area with mild soap and water; seek medical attention if symptoms persist.

Inhalation:
Remove victim to fresh air; keep warm and quiet; give oxygen if breathing is difficult and seek medical attention if symptoms persist.

Ingestion:
Give 1-2 glasses of milk or water and induce vomiting; seek medical attention if symptoms persist. Never induce vomiting or give anything by mouth to an unconscious person.

Note to Physicians:
No data available.

SECTION 7 : Reactivity Data

Chemical Stability:
Unstable [ ] Stable [ X ]

Conditions to Avoid:
CONDITIONS TO AVOID - INSTABILITY: None; CONDITIONS TO AVOID - HAZARDOUS POLYMERIZATION: None

Incompatibilities with Other Materials:
Mixtures containing chlorides, bromides or iodides; alkali cyanides; thycyanate solutions; double cyanides; hydrogen peroxide; halogens; ammonia

Hazardous Polymerization:
Will occur [ ] Will not occur [ X ]

Hazardous Decomposition Products:
Fumes of gold, nascent halogens, carbon monoxide, carbon dioxide

SECTION 8 : Precautions For Safe Handling

Spill Cleanup Measures:
Wear appropriate respiritory and protective equipment specified in section VIII-control measures. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.
Other Precautions:
None

HAZARD LABEL INFORMATION:
Store in cool, dry area Store in tightly sealed container Wash thoroughly after handling

Handling:
None

Storage:
None

Hygiene Practices:
WORK/HYGIENIC/MAINTENANCE PRACTICES: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

Waste Disposal:
Dispose of in accordance with local, state and federal regulations.

SECTION 9 : Control Measures

Ventilation System:
Good general ventilation should be sufficient to control airborne levels.

Hand Protection Description:
Rubber gloves

Eye/Face Protection:
Safety glasses

Protective Clothing/Body Protection:
Protective gear suitable to prevent contamination

Respiratory Protection:
NIOSH approved respirator

NIOSH approved respirator Impervious gloves Safety glasses Clothes to prevent skin contact

Ingredient Guidelines

Ingredient: Gold metal
Guideline Information: ACGIH TLV: NE; OSHA PEL: NE; OTHER LIMITS: NE

Ingredient: See SECTION 16-Other Information
Guideline Information: ACGIH TLV: No data.; OSHA PEL: No data.; OTHER LIMITS: No data.

SECTION 10 : Other Information

Gold metal:
Section 302:
No

Section 304:
No

Section 313 Toxic Release Form:
No

See SECTION 16-Other Information:

Section 302:
No

Section 304:
No

Section 313 Toxic Release Form:
No

MSDS Revision Date:
06/25/2008

Disclaimer:
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Comment:
Control of Substances Hazardous to Health Regulations EH40 Occupational Exposure Limits
Maximum Exposure Limit: NE Occupational Exposure Standard: NE

Abbreviations used
NA=Not Applicable NE: Not Established

ADDENDUM: Other Client Information

Notes: EJTAU014MM, EJTAU02.3A1, EJTAU02.5MM, EJTAU02A.03, EJTAU08X016, EJTAUCR3A2, EJTAUCR403A4, EJTAUCR403A2, EJTAUCR402A1, EJTAUNI403A2, EJTAUNI404A4MM, EJUAUNIDELTA, EJTAUDP60MM+, KLJ811003, EVMAUDPDSHT50, EVMAUDPDSHT80, EJTAUDP350OD, EJTAUDA5X3, EVMAUDPDSHT1, EVMAUDPQX0H, EVMAUDPQX60, EJTAUDP352A2, EVMAUDPDSHT, EJTAUX19A.5M, EJTAUX2.25A2, EJTAUX402A4H, EJTAUX40X1MM, EJTAUXX1.5A1, EJTAUX1.2A2, EJTA

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