Intlvac

Material Safety Data Sheet

June 2003

SECTION 1: IDENTIFICATION

Product Name: Mung I

1) Hydrocarbon Vacuum Grease
   - PHYSICAL STATE: semi-solid grease
   - VAPOR PRESSURE: < .0001 Torr @ 25C
   - BOILING POINT: >200 C
   - EVAPORATION RATE (ether = 1): Nil
   - VAPOR DENSITY: NA
   - WT % VOLATILES: Nil
   - SPECIFIC GRAVITY: 0.99
   - VISCOSITY: NA
   - SOLUBILITY IN WATER: Nil
   - APPEARANCE: Clear yellow to amber grease

2) Silver Flake

   - Synonym: Argentum
   - Chemical Family: Metal
   - Cas: 7440-22-4
   - Molecular Formula: Ag
   - Boiling Point: 2210^{o}C
   - % Volatile: 0
   - Solubility in Water: Insoluble
   - Specific Gravity (H2O = 1): 10.49
   - Freezing/Melting Point: 960.8^{o}C
   - Evaporation Rate (butyl Acetate = 1): Not applicable
   - Vapor Density (air = 1): 10.49
   - Vapor Pressure: Essentially 0
   - Appearance and Odor: Soft, ductile, lustrous white metal, no odor
   - Other: None

SECTION II: INGREDIENTS

1) Hydrocarbon Vacuum Grease

   Hazardous ingredients as defined in 29 CFR 1910.1300
   (Carcinogens identified with an asterisk*)

GENERIC NAME: triricinoleoyl glycerol, cellulose acetate butyrate
CHEMICAL FORMULA: $C_{57}H_{104}O_9$, $(C_{12}H_{18}O_7)_n$, respectively
HAZARDOUS INGREDIENTS: None

2) Chemical metal
Cas number: 7440-22-4
Percent: 100
PEL – 0.01 mg 1 m^3 TLV – 0.1 mg 1 m^3

Note: Silver Flake percent activity: 99.9+

SECTION III: EFFECTS OF OVER EXPOSURE

1) Hydrocarbon Vacuum Grease

POSSIBLE ENTRY ROUTES: Ingestion
TARGET ORGANS: None known
ACUTE EFFECTS: None known. Material is not expected to be dermatitic or a sensitizer.
CHRONIC EFFECTS: None known

2) Silver Flake

A. ANIMAL TOXICITY

LD50: No data
LD50: No data
Other: Inhalation, human TCLO = 1mg/m3

B. EFFECTS OF EXPOSURE

Acute Effects

- Ingestion: May cause kidney injury
- Skin Contact: May cause localized pigmentation
- Eye Contact: Powder may be irritating
- Inhalation: May cause kidney injury
- Medical Conditions, if any, aggravated by the Chemical: None known
- Other Health Hazards: None known
- Most Likely Routes of Entry: Ingestion

Chronic Effects

- Ingestion: May cause kidney injury
- Skin Contact: None known
- Eye Contact: None known
- Inhalation: May cause kidney injury

- Other: An experimental equivocal tumorigenic agent

SECTION IV: EMERGENCY AND FIRST AID PROCEDURES

1) Hydrocarbon Vacuum Grease

SKIN: Wash with soap and water.
EYES: Flush with water. Contact a physician.
INGESTION: Contact a physician.

2) Silver Flake

Ingestion:	No date available but one should obtain medical attention.
Skin Contact:	Remove contaminated clothing, flood skin with large amounts of water. If irritation persists, seek medical attention.
Eye Contact:	Immediately flush eyes, including under eyelids, with large amounts of water for at least 15 minutes. Call a physician.
Inhalation:	No specific information available, one should obtain medical attention.

SECTION V: FIRE AND EXPLOSION DATA

1) Hydrocarbon Vacuum Grease

- FLASH POINT: >270 C
- METHOD USED: Cleveland Open Cup
- EXPLOSIVE LIMITS LOWER: NA UPPER: NA
- EXTINGUISHING MEDIA: Water fog, chemical foam or carbon dioxide. NFPA Class III B Material.
- SPECIAL FIREFIGHTING PROCEDURES: Wear breathing gear when fighting fires in enclosed spaces; incomplete combustion of this material may produce carbon monoxide!

UNUSUAL FIRE AND/OR EXPLOSION HAZARDS: None

2) Silver Flake

- Flash Point: (^{o}F): Not applicable
- Flammable Limits in Air % by Volume: Lower and Upper – Not applicable
- Autoignition Temperature: No date
- Extinguishing Media: If metal is burning use dry chemical extinguishing agents, dry sand or dry ground dolomite. Only powder forms are likely to be fire hazard.
- Special Fire Fighting Procedures: No special fire fighting procedures needed. Use normal procedures which include wearing NIOSH/MSHA approved self-contained breathing apparatus, flame and chemical resistant clothing, hats, boots and gloves. If without risk, remove material from fire area. Cool container with water from maximum distance.

REACTIVITY

- Incompatibility: Acetylene, ammonia, bromoazide, chlorine trifluoride, ethyleneimine, oxalic acid, tartaric acid, mineral acids, oxidizers
- Hazardous Decomposition Products: Silver oxides
- Conditions to Avoid: Heat, sparks, and flame for powder
- Stability: Stable
- Hazardous Polymerization: Will not occur

SECTION VI: SPILL, LEAK MAINTENANCE/REPAIR AND DISPOSAL PROCEDURES

1) Hydrocarbon Vacuum Grease

Steps to be taken in case Material is released or spilled
Material is a semi-solid below 100C. Spills may be wiped up with a cloth

- D.O.T. (49CFR 171.8)/E.P.A. (40CRF 117) spill reporting information
- Hazardous Substance: None
- Reportable Quantity: Not applicable
- Concentration of Hazardous Substance: Not applicable
- Reportable Quantity of Product: Not Applicable
- Comments: None

2) Silver Flake

- RCRA Code: DO11
- TSCA Registered: Yes
- Spill and Leak Procedures: Wearing full protective equipment, cover spill with dry sand or vermiculite. Mix well and carefully transfer to a container.
- Waste Disposal: Consult state, local or federal EPA regulations for proper disposal.

SECTION VII: ROUTING HANDLING PRECAUTIONS

1) Hydrocarbon Vacuum Grease

Protective Equipment:
- Eyes: Use proper protection – safety glasses as a minimum
- Skin*: Washing at mealtime and end of shift is adequate
- Inhalation: No respiratory protection is required
- Ventilation: Local Exhaust: None
- Mechanical (General): Recommended
- Suitable Respirator: None should be needed
- These precautions are for room temperature handling, use at elevated temperatures, or aerosol/spray applications. May require added precautions.
- Good practice requires that gross amount of any chemical be removed from the skin as soon as practical, especially before eating or smoking.
- Comments: None

SPECIAL PRECAUTIONS

2) Silver Flake

- Handling and Storage: Keep container tightly closed. Store in a cool, dry, well-ventilated area. Wash thoroughly after use.
- Other Precautions: Lab coat and apron, flame and chemical resistant coveralls, eyewash capable of sustained flushing, safety drench shower and hygienic facilities for washing.
- Transportation Information – U.S. D.O.T.
- Per49CFR 172.101
- Proper Shipping Name: Not registered
- Hazard Classification: None
- UN #: None

SECTION VIII: COMMENTS

Massive forms are stable in air and present little or no hazard.

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE, HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.