

Inlvac

Material Safety Data Sheet

June 2003

SECTION 1: IDENTIFICATION

Product Name: Mung II

1) Dow Corning Vacuum Grease

- Proper shipping name: (49 CFR 172.101) None
- Dot hazard name: (49 CFR 172.101) None
- Dot ID number: (49 CFR 172.101) None
- RCRA Hazard class; (40 CFR 261) (If discarded) None
- EPA Priority Pollutants: (40 CRF 122.53) None
- NFPA: National Fire Protection Association – 704
- Health (NFPA) = 1
- Flammability (NFPA) = 1
- Reactivity (NFPA) = 0
- Cas No: Mixture
- Dow Corning Warning Code 62
- Generic description Silicone
- Boiling Point (At 760 MM HQ): Above 300F/149C
- Specific Gravity (At 77 DEG F/25 DEG C): 1.0
- Melting Point: Not applicable
- Vapor Pressure (At 77 DEG F/25 DEG C): Less than 5 MM
- Vapor Density (Air = 1 at 77 DEG F/25 DEG C: Not applicable
- Percent Volatile by Weight (%): Less than 1
- Evaporation Rate (Ether = 1): Less than 1
- Solubility in Water (%): Less than 0.1%
- Odor, Appearance, Color: Very little odor, paste like, some color
- Note: The above information is not intended for use in preparing product specifications. Contact Dow Corning before writing specifications.

2) Silver Flake

- Synonym: Argentum
- Chemical Family: Metal
- Cas: 7440-22-4
- Molecular Formula: Ag
- Boiling Point: 2210°C
- % Volatile: 0
- Solubility in Water: Insoluble

- Specific Gravity (H₂O = 1): 10.49
- Freezing/Melting Point: 960.8°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) Silicone

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

OSHA (PEL): 0.01 mg/m³
ACGIH (TLV): 0.1 mg/m³

None: present
Percent: 1LV (units)
Comment: None

- ### 2) Chemical metal
- Cas number: 7440-22-4
Percent: 100
PEL – 0.01 mg 1 m³ TLV – 0.1 mg 1 m³

Note: Silver Flake percent activity: 99.9+

SECTION III: EFFECTS OF OVER EXPOSURE

1) Silicone

Eye: May cause temporary discomfort
Skin: Single, prolonged exposure causes no known adverse effect
Inhalation: No irritation to nose or throat expected. No injury is likely from relatively short exposure
Oral: Amounts transferred to the mouth by fingers etc., during normal operations should cause no injury
Comments: No known adverse chronic health effects, but unnecessary exposure to any chemical should be avoided

This product, as with any chemical, may enhance allergic conditions on certain people. We do not know of any medical conditions that might be aggravated to exposure to this product.

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) Silicone

Eyes:	Flush with water
Skin:	Wipe off and flush with water
Inhalation:	No problem
Oral:	No problem
Comment:	None

2) Silver Flake

Ingestion:	No data 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) Silicone

- ◆ Flash Point (method used): Open cup above 250°F/121°C
- ◆ Autoignition: Not determined
- ◆ Flammability Limits in Air: Lower: N.O. Upper: N.O.
- ◆ Extinguishing media
- ◆ Water: Water Fog x CO2 x Dry Chemical x Foam x Other
- ◆ Special Fire Fighting Procedures: Self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.
- ◆ Unusual Fire and Explosion Hazard: None known to Dow Corning
- ◆ Comments: N.D. – Not determined
- ◆ Stability: Stable
- ◆ Incompatibility (material to avoid): Oxidizing material can cause a reaction
- ◆ Conditions to Avoid: Not applicable
- ◆ Hazardous Decomposition Products: Silicone Dioxide, Carbon Dioxide, and traces of incompletely burned Carbon products
- ◆ Hazardous Polymerization: Will not occur
- ◆ Conditions to avoid: Not applicable
- ◆ Comments: None

2) Silver Flake

- ◆ Flash Point: (°F): Not applicable
- ◆ Flammable Limits in Air % by Volume: Lower and Upper – Not applicable
- ◆ Autoignition Temperature: No data
- ◆ 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) Silicone

Steps to be taken in case Material is released or spilled

Remove product and use absorbent material to take care of any oil-like residues.

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 required

Waste Disposal Method: Dow Corning suggests that all local, state and federal regulations concerning health and pollution be reviewed to determine approved disposal procedures. Contact Dow Corning if there are any disposal questions

- ◆ D.O.T. (49CFR 171.8)/E.P.A. (40CFR 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) Silicone

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.