

DOW CORNING CORPORATION MATERIAL SAFETY DATA SHEET

MOLYKOTE(R) G-N METAL ASSEMBLY PASTE

SECTION 1 - Identification of the Substance and of the Company

Dow Corning Corporation
South Saginaw Road
Midland, Michigan 48686

24 Hour Emergency Telephone: 989.496.5900
Customer Service: 989.496.6000
Product Disposal Information: 989.496.6315
CHEMTREC: 800.424.9300

MSDS No.: 02076683

Revision Date: 01.22.2002

Generic Description: Inorganic compounds in mineral oil
Physical Form: Paste
Color: Charcoal gray
Odor: Slight odor

NFPA Profile: Health 1, Flammability 1, Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

SECTION 2 - OSHA Hazardous Components

CAS No.	WT %	COMPONENT
64741-89-5	40.0 - 70.0	Solvent-refined light paraffinic petroleum distillate
7446-26-6	10.0 - 30.0	Zinc pyrophosphate
7784-30-7	1.0 - 5.0	Aluminum phosphate

The above components are hazardous as defined in 29 CFR 1910.1200.

SECTION 3 - Effects of Overexposure

ACUTE EFFECTS

Eye: Direct contact may cause mild irritation.
Skin: No significant irritation expected from a single short-term exposure.
Inhalation: Vapor may irritate nose and throat. Vapor overexposure may cause drowsiness.
Oral: Low ingestion hazard in normal use.

PROLONGED/REPEATED EXPOSURE EFFECTS

Skin: Repeated or prolonged contact may cause defatting and drying of skin which may result in skin irritation and dermatitis.
Inhalation: Overexposure by inhalation may injure the following organ(s): nervous system.
Oral: Repeated ingestion or swallowing large amounts may injure internally.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

No known applicable information.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

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SECTION 4 - First Aid Measures

- Eye:** Immediately flush with water for 15 minutes
- Skin:** Remove from skin and wash thoroughly with soap and water or waterless cleanser. Get medical attention if irritation or other ill effects develop or persist.
- Inhalation:** Remove to fresh air. Get medical attention if ill effects persist.
- Oral:** Get medical attention.
- Comments:** Treat according to person's condition and specifics of exposure.

SECTION 5 - Fire Fighting Measures

- Flash Point:** Not applicable - Solid
- Autoignition Temperature:** Not determined
- Flammability Limits in Air:** Not determined
- Extinguishing Media:** On large fires, use dry chemical, foam or water spray. On small fires, use carbon dioxide (CO₂), dry chemical or water spray. Water can be used to cool fire exposed containers.
- Fire Fighting Measures:** Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
- Unusual Fire Hazards:** None

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal breakdown of the product during fire or very high heat conditions may evolve the following hazardous decomposition products: Carbon oxides and traces of incompletely burned carbon compounds; Nitrogen oxides; Sulfur oxides; Metal oxides; Phosphorous oxides; Formaldehyde.

SECTION 6 - Accidental Release Measures

CONTAINMENT/CLEANUP

Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since some silicone materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

NOTE: See Section 8 for Personal Protective Equipment for Spills. Call Dow Corning Corporation, 989.496.5900, if additional information is required.

SECTION 7 - Handling and Storage

Use with adequate ventilation. Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist dust or fumes. Keep container closed. Do not take internally.

Use reasonable care and store away from oxidizing materials.

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SECTION 8 - Exposure Controls/Personal Protection

COMPONENT EXPOSURE LIMITS

CAS No.	Component Name	Exposure Limits
64741-89-5	Solvent-refined light paraffinic petroleum distillate	Observe oil mist limits. OSHA PEL (final rule) and ACGIH TLV: TWA 5 mg/m ³ ; ACGIH STEL 10 mg/m ³
7784-30-7	Aluminum phosphate	Observe aluminum (soluble salts) limits. OSHA PEL (final rule) and ACGIH TLV, as aluminum: TWA 2 mg/m ³

ENGINEERING CONTROLS

Local Ventilation: Recommended
General Ventilation: Recommended

PERSONAL PROTECTIVE EQUIPMENT FOR ROUTINE HANDLING

Eyes: Use proper protection - safety glasses as a minimum
Skin: Wash at mealtimes and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.
Suitable Gloves: Neoprene Rubber (R). Polyvinylalcohol. Nitrile Rubber. Polyvinylchloride.
Inhalation: Use respiratory protection unless adequate local exhaust ventilation is provided or air sampling data show exposures are within recommended exposure guidelines. Industrial Hygiene Personnel can assist in judging in adequacy of existing engineering controls.
Suitable Respirator: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits as determined by air sampling or are unknown, appropriate respiratory protection should be worn. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

PERSONAL PROTECTIVE EQUIPMENT FOR SPILLS

Eyes: Use full face respirator.
Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.
Inhalation/Suitable Respirator: Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown or any other circumstance where air purifying respirators may not provide adequate protection.
Precautionary Measures: Avoid eye contact. Avoid skin contact. Avoid breathing vapor, mist, dust or fumes. Keep container closed. Do not take internally. Use reasonable care.

NOTE: These precautions are for room temperature handling. Use at elevated temperatures or aerosol/spray applications may require added precautions.

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SECTION 9 - Physical and Chemical Properties

Physical Form:	Paste	Color:	Charcoal gray
Odor:	Slight odor	Specific Gravity at 25°C:	1.35
Viscosity:	Not determined	Freezing/Melting Point:	Not determined
Boiling Point:	Not determined	Vapor Pressure at 25°C:	Not determined
Vapor Density:	Not determined	Solubility in Water:	Not determined
pH:	Not determined	Volatile Content:	Not determined

NOTE: The above information is not intended for use in preparing product specifications. Contact Dow Corning before writing specifications.

SECTION 10 - Stability and Reactivity

Chemical Stability:	Stable
Hazardous Polymerization:	Hazardous polymerization will not occur
Conditions to Avoid:	None
Materials to Avoid:	Oxidizing material can cause a reaction

SECTION 11 - Toxicological Information

SPECIAL HAZARD INFORMATION ON COMPONENTS

No known applicable information.

SECTION 12 - Ecological Information

ENVIRONMENTAL FATE AND DISTRIBUTION

Complete information is not yet available.

ENVIRONMENTAL EFFECTS

Complete information is not yet available.

FATE AND EFFECTS IN WASTE WATER TREATMENT PLANTS

Complete information is not yet available.

ECOTOXICITY CLASSIFICATION CRITERIA

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <=2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p. 34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

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SECTION 13 - Disposal Considerations

RCRA HAZARD CLASS (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No.

State or local laws may impose additional regulatory requirements regarding disposal.

Call Dow Corning Corporate Environmental Management, 989.496.6315, if additional information is required.

SECTION 14 - Transport Information

DOT ROAD SHIPMENT INFORMATION (49 CFR 172.101)

Not subject to DOT.

OCEAN SHIPMENT (IMDG)

Not subject to IMDG code.

AIR SHIPMENT (IATA)

Not subject to IATA regulations.

Call Dow Corning Transportation, 989.496.8577, if additional information is required.

SECTION 15 - Regulatory Information

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA TITLE III CHEMICAL LISTINGS:

Section 302 Extremely Hazardous Substances:

None

Section 304 CERCLA Hazardous Substances:

CAS Number	Wt. %	Component Name
7446-26-6	13.0	Zinc pyrophosphate

Section 312 Hazard Class:

Acute: Yes Chronic: No
Fire: No Pressure: No
Reactive: No

Section 313 Toxic Chemicals:

CAS Number	Wt. %	Component Name
7446-26-6	13.0	Zinc pyrophosphate
7784-30-7	2.0	Aluminum phosphate

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SECTION 15 - Regulatory Information (continued)

SUPPLEMENTAL STATE COMPLIANCE INFORMATION

California

WARNING: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

CAS Number	Wt. %	Component Name	
None	<1.0	Vendor proprietary ingredient	Carcinogenic. Developmental toxin. Female reproductive toxin. Male reproductive toxin.

Massachusetts

CAS Number	Wt. %	Component Name
64741-89-5	40.0 - 70.0	Solvent-refined light paraffinic petroleum distillate
1317-33-5	15.0 - 40.0	Molybdenum disulfide
7446-26-6	10.0 - 30.0	Zinc pyrophosphate
7631-86-9	1.0 - 5.0	Silica, amorphous
7784-30-7	1.0 - 5.0	Aluminum phosphate

New Jersey

CAS Number	Wt. %	Component Name
64741-89-5	40.0 - 70.0	Solvent-refined light paraffinic petroleum distillate
1317-33-5	15.0 - 40.0	Molybdenum disulfide
7446-26-6	10.0 - 30.0	Zinc pyrophosphate
1306-06-5	10.0 - 30.0	Tricalcium phosphate, hydrated
110-30-5	3.0 - 7.0	Ethylene distearylamine
72623-86-0	1.0 - 5.0	Hydrotreated neutral oil, C15-C30
7631-86-9	1.0 - 5.0	Silica, amorphous
7784-30-7	1.0 - 5.0	Aluminum phosphate

Pennsylvania

CAS Number	Wt. %	Component Name
64741-89-5	40.0 - 70.0	Solvent-refined light paraffinic petroleum distillate
1317-33-5	15.0 - 40.0	Molybdenum disulfide
7446-26-6	10.0 - 30.0	Zinc pyrophosphate
1306-06-5	10.0 - 30.0	Tricalcium phosphate, hydrated
110-30-5	3.0 - 7.0	Ethylene distearylamine
7631-86-9	1.0 - 5.0	Silica, amorphous
7784-30-7	1.0 - 5.0	Aluminum phosphate

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SECTION 16 - Other Information

Prepared By: Dow Corning Corporation

This data is offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. 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.

(R) Indicates Registered Trademark