

Dow Corning Toray Co., Ltd.
Material Safety Data Sheet

Revision Date: 2005/08/26
MSDS No.: 03284867

MOLYKOTE(R) BR-2 PLUS GREASE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : MOLYKOTE(R) BR-2 PLUS GREASE
Company Name : Dow Corning Toray Co., Ltd.
Address : 100-0005, AIG Bldg., 1-1-3 Marunouchi, Chiyoda-ku, Tokyo, Japan
Phone Number : 03-3287-8300 (Customer Service)
Fax Number : 03-3287-8311
Product Code : 03284867
Emergency Telephone Number : 0436-21-3101

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization : Mixture
Generic Name : Molybdenum disulfide grease

Ingredients and Contents

<u>CAS Number</u>	<u>ENCS Number</u>	<u>Chemical formula</u>	<u>Wt %</u>	<u>Component Name</u>
64741-96-4	(9)-1692	-	40 - 50	Solvent refined heavy naphthenic distillate (petroleum)
64742-54-7	(9)-1692	-	10 - 20	Hydrotreated heavy paraffinic petroleum distillate
64742-65-0	(9)-1692	-	10 - 20	Solvent dewaxed heavy paraffinic petroleum distillate
64741-88-4	(9)-1692	-	10 - 20	Solvent-refined heavy paraffinic petroleum distillate
68442-22-8	-	-	1 - 10	Zinc dialkyldithiophosphate

Comments : This product contains the above chemical(s) listed by regulations and/or European Commission Directive 1999/45/EC (Article 3[3]).

3. HAZARDS IDENTIFICATION

Overall Hazard Classification

Hazardous Properties : Not hazardous.
Environmental Effects : Not applicable.
Physical and Chemical Risks : Not applicable.

Signs and Symptoms : No significant adverse effects from a single exposure expected from normal use.
Hazard Classification (Japanese system) : Not applicable.

4. FIRST AID MEASURES

In Case of Inhalation : No first aid should be needed.
In Case of Skin Contact : No first aid should be needed.
In Case of Eye Contact : Immediately flush with water for 15 minutes.
In Case of Ingestion : Get medical attention.
Comments : Treat according to person's condition and specifics of exposure.

**Dow Corning Toray Co., Ltd.
Material Safety Data Sheet**

Revision Date: 2005/08/26
MSDS No.: 03284867

MOLYKOTE(R) BR-2 PLUS GREASE

Note to physicians : Treat symptomatically. For further information, the medical practitioner should contact Dow Corning Toray Co.,Ltd.

5. FIRE FIGHTING MEASURES

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.

Unsuitable Extinguishing Media : None established.

Specific Hazards during Fire : None.

Specific Fire Fighting : Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Protection for Fire-fighter : Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions : Avoid skin and eye contact. Do not take internally.

Environmental Precautions : Do not allow large quantities to enter drains or surface waters.

Methods for Cleaning or Taking up : Observe all personal protective equipment recommendations described in this MSDS. If diked material can be pumped, store recovered material in appropriate container. Wipe up or scrape up and contain for salvage or disposal. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. 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 laws and regulations are applicable.

7. HANDLING AND STORAGE

Handling

Technical Measures : Use with adequate ventilation.

Precautions : Avoid skin and eye contact.

Advice on safe handling : Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.

Storage

Advice on storage : Use reasonable care and store away from oxidizing materials.

Suitable packaging materials : None established.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Local Ventilation : None should be needed.

General Ventilation : Recommended.

Concentration Control Notification #26 from Ministry of Labor

None known.

Industrial Hygiene Standards

<u>Component Name</u>	<u>Exposure Limits</u>
Solvent refined heavy naphthenic distillate (petroleum)	Observe oil mist limits. OSHA PEL (final rule) and ACGIH TLV: TWA 5 mg/m ³ ; ACGIH STEL 10 mg/m ³ .
Hydrotreated heavy 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 .

Dow Corning Toray Co., Ltd. Material Safety Data Sheet

Revision Date: 2005/08/26
MSDS No.: 03284867

MOLYKOTE(R) BR-2 PLUS GREASE

Solvent dewaxed heavy 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 .
Solvent-refined heavy 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 .

Personal Protective Equipment

Personal Protective Equipment for Routine Handling

Respiratory protection	: No respiratory protection should be needed.
Suitable Respirator	: None should be needed.
Hand protection	: No special protection needed.
Eye protection	: Use proper protection - safety glasses as a minimum.
Skin protection	: Washing at mealtime and end of shift is adequate.
Hygiene Measures	: Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking.

Personal Protective Equipment for Spills

Respiratory protection	: No respiratory protection should be needed.
Eye protection	: Use proper protection - safety glasses as a minimum.
Skin protection	: Washing at mealtime and end of shift is adequate.
Precautionary Measures	: Avoid skin and eye contact. Do not take internally. Use reasonable care.
Note	: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Form	: Grease
Color	: Black
Odour	: Slight odor

pH : Not determined.

Phase Transition Temperature or Temperature Range

Boiling point/range	: Not determined.
Melting point/range	: Not determined.

Decomposition Temperature : Not determined.

Flash Point : > 200 °C(Cleveland Open Cup)

Autoignition Temperature : Not determined.

Characteristics of Explosives : Not determined.

Vapor Pressure @ 25°C : Not determined.

Vapor Density : Not determined.

Density : 0.89 g/cm³

Solubility : Not determined.

Partition coefficient : Not determined.

(n-octanol/water)

Viscosity : Not determined.

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

10. STABILITY AND REACTIVITY

Stability : Stable

Dow Corning Toray Co., Ltd.
Material Safety Data Sheet

Revision Date: 2005/08/26
MSDS No.: 03284867

MOLYKOTE(R) BR-2 PLUS GREASE

Reactivity : Hazardous polymerization will not occur.
Conditions to Avoid : None.
Materials to Avoid : Can react with strong oxidising agents.
Hazardous Decomposition Products : Metal oxides. Fluorine compounds. Carbon oxides and traces of incompletely burned carbon compounds. Sulfur oxides. Phosphorous oxides. Formaldehyde.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

None known.

Local Effects

Eye : Direct contact may cause mild irritation.
Skin : No significant irritation expected from a single short-term exposure.

Acute Effects

Oral : Low ingestion hazard in normal use.
Inhalation : Irritates respiratory passages very slightly.

Sensitizers

: None known.

Chronic Effects

Skin : Repeated or prolonged contact may cause defatting and drying of skin which may result in skin irritation and dermatitis.

Oral : Repeated ingestion or swallowing large amounts may injure internally.

Inhalation : No known applicable information.

Carcinogens

: None known.

Mutagens

: None known.

Teratogens

: None known.

Reproductive Toxins

: None known.

Other information : No known applicable information.

The above listed potential effects of overexposure are based on actual data, the results of studies performed upon similar compositions, component data, and/or expert review of the products.

12. ECOLOGICAL INFORMATION

Mobility : Solid material, insoluble in water.

Ecotoxicity

Others : Harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment. However, due to the physical form and water-insolubility of the product the bioavailability is negligible.

13. DISPOSAL CONSIDERATIONS

Waste Disposal : This product falls under Industrial Waste based on Wastes Disposal and Public Cleansing Law. Dispose of in accordance with this law and local regulations.

Note : None.

14. TRANSPORT INFORMATION

Local Regulations : Referred to Section 15.

International Regulations

Sea Transport (IMDG)

Not subject to IMDG code.

Dow Corning Toray Co., Ltd.
Material Safety Data Sheet

Revision Date: 2005/08/26
MSDS No.: 03284867

MOLYKOTE(R) BR-2 PLUS GREASE

Air Transport (IATA)
Not subject to IATA regulations.

15. REGULATORY INFORMATION

Law Concerning Examination and Regulation of Manufacture, etc. of Chemical Substances : Not applicable.

Industrial Safety and Health Law

Notification Substance	<u>Specific Number</u>	<u>Notification Component(s)</u>	<u>Wt %</u>
	169	Solvent refined heavy naphthenic distillate (petroleum)	40 - 50
	169	Hydrotreated heavy paraffinic petroleum distillate	10 - 20
	169	Solvent dewaxed heavy paraffinic petroleum distillate	10 - 20
	169	Solvent-refined heavy paraffinic petroleum distillate	10 - 20

Indication Substance : Not applicable.

Ordinance on Prevention of Organic Solvent Poisoning : Not applicable.

Ordinance on Prevention of Hazards due to Specified Chemical Substances : Not applicable.

Ordinance on Prevention of Lead Poisoning : Not applicable.

Ordinance on Prevention of Teraalkyl Lead Poisoning : Not applicable.

Hazardous Material Banned Substance : Not applicable.

High Pressure Gas Safe Law : Not applicable.

Fire Service Law : DESIGNATED FLAMMABLE SUBSTANCES, OTHER PLASTICS (3,000kg)

Poisonous and Deleterious Substance Control Law : Not applicable.

Pollutant Release and Transfer Register : Not applicable.

Marine Pollutant Prevention Law : Not Classified as a Marine Pollutant

Chemical Inventories

MITI : All components are listed on ENCS or its exempt rule.

IECSC : All ingredients listed or exempt.

TSCA : Not determined.

EINECS : Not determined.

Dow Corning Toray Co., Ltd.
Material Safety Data SheetRevision Date: 2005/08/26
MSDS No.: 03284867**MOLYKOTE(R) BR-2 PLUS GREASE**DSL : Not determined.
PICCS : Not determined.
AICS : Not determined.**16. OTHER INFORMATION**

Bibliography: Statue book of chemicals, Internal Technical Data and others

These data are 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. This Product has been developed and manufactured for general industrial use. For medical use, or other uses where safety considerations may be required, you must in advance test and review the safety of your intended application. Moreover, this Product is not for human implant nor human injection, nor use for applications which may present risk of accumulating inside human bodies.

***** This is the last page. *****