



SERVICE BULLETIN

Classification: BR04-003	Reference: NTB04-066	Date: May 28, 2004
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2004 TITAN AND ARMADA; BRAKE JUDDER FROM FRONT BRAKES

APPLIED VEHICLES: 2004 Titan (A60)
2004 Armada (TA60)

IF YOU CONFIRM:

While braking, especially when braking at highway speeds:

- A steering wheel shake,
- Body vibration, or
- Brake pedal pulsation (also known as "brake judder").

ACTIONS:

- Use an on-car brake lathe to "turn" (resurface) the front brake rotors.
- Install new front brake pads.
- Apply "special" grease to the brake pad retainers.
- "Burnish" the brake pads.

PARTS INFORMATION

DESCRIPTION	PART NUMBER	QUANTITY
Brake Pad Kit, Front	41060-7S026	1
Torque Member Anchor Bolts	41005-7S000	4
Molykote® M-77 Grease*	44003-7S000CM	As needed

Molykote® is a registered trademark of Dow Corning Corporation.

* Order Molykote® M-77 grease from your PDC.

IMPORTANT: The purpose of "ACTIONS" (above) is to give you a quick idea of the work you will be performing. You **MUST** closely follow the entire Service Procedure (starting on page 2) as it contains information that is essential to successfully completing this repair.

Nissan Bulletins are intended for use by qualified technicians, not 'do-it-yourselfers'. Qualified technicians are properly trained individuals who have the equipment, tools, safety instruction, and know-how to do a job properly and safely. NOTE: If you believe that a described condition may apply to a particular vehicle, DO NOT assume that it does. See your Nissan dealer to determine if this applies to your vehicle.

CLAIMS INFORMATION

Submit a Primary Failed Part (PP) line using the following claims coding:

DESCRIPTION	PFP	OP CODE	SYM	DIA	FRT
Turn both FRONT brake rotors <u>on</u> the vehicle (1)	(2)	PB25AA	EA	32	(3)

1. Includes time allowance to install the new pads and hardware and burnish the pads.
2. Reference the indicated Titan or Armada Parts Catalog and use the front brake rotor P/N as the PFP.
3. Reference the current Nissan Warranty Flat Rate Manual and use the indicated FRT.

SERVICE PROCEDURE

Turn the Front Brake Rotors

1. Remove both front brake caliper assemblies.
 - Refer to the Electronic Service Manual (ESM), section BR for brake caliper assembly removal.
2. Inspect / measure the rotors to make sure they are serviceable (they can be reused / resurfacing is possible).
 - Refer to the ESM, section BR, for brake rotor inspection.
 - Minimum Thickness:
24.5 mm (0.965 in.)
Any thickness under that: Replace both rotors.

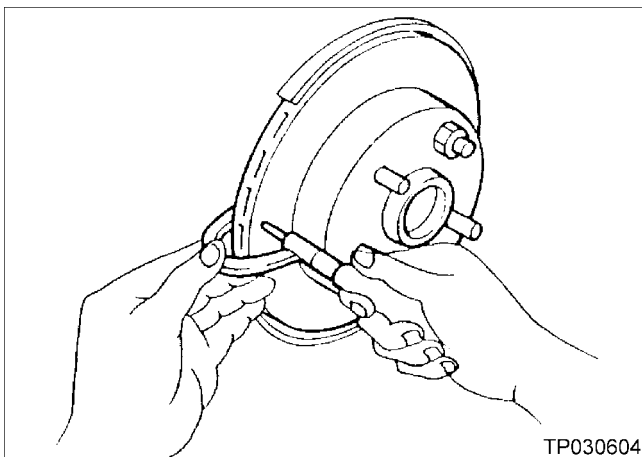


Figure 2

IMPORTANT: If new rotors are required, “index” them to the hub (see “Rotor Indexing” on page 6).

3. Resurface both front rotors using an **On-Car Brake Lathe**.

IMPORTANT NOTES:

- You must use an on-car brake lathe (such as the ProCut™ PFM9.0 or equivalent). An on-car brake lathe is a required essential tool and must be used to perform warranty brake rotor surfacing.
- The ProCut™ PFM9.0 can be ordered from Nissan TECH-MATE at 1-800-662-2001.
- The on-car brake lathe is more effective in reducing brake rotor runout than the conventional off-car lathe method.
- When using the on-car brake lathe, prevent metal shavings from contacting or collecting on the ABS speed sensors.
- Remove any shavings that stick to the ABS speed sensor's magnet. It is best to clean the ABS sensor with the rotor removed.
- If the rotor must be removed for any reason, mark the exact location (rotor to axle hub) before removing the rotor (see Figure 6 on page 6). This will make sure you reinstall the rotor back to the same location.
- Do not tighten the wheel lug nuts with an air impact driver.
- Tighten the wheel lug nuts to the proper torque specification. Uneven or high torque applied to the lugs may distort the brake rotor and hub. This may result in increased rotor runout and excessive rotor thickness variation as the rotor wears.

4. After the rotors have been resurfaced:

- Recheck the rotor thickness. Specification: 24.5 mm (0.965 in.) minimum thickness.
- Check the rotor runout. Specification: 0.04 mm (0.0016 in) maximum runout.

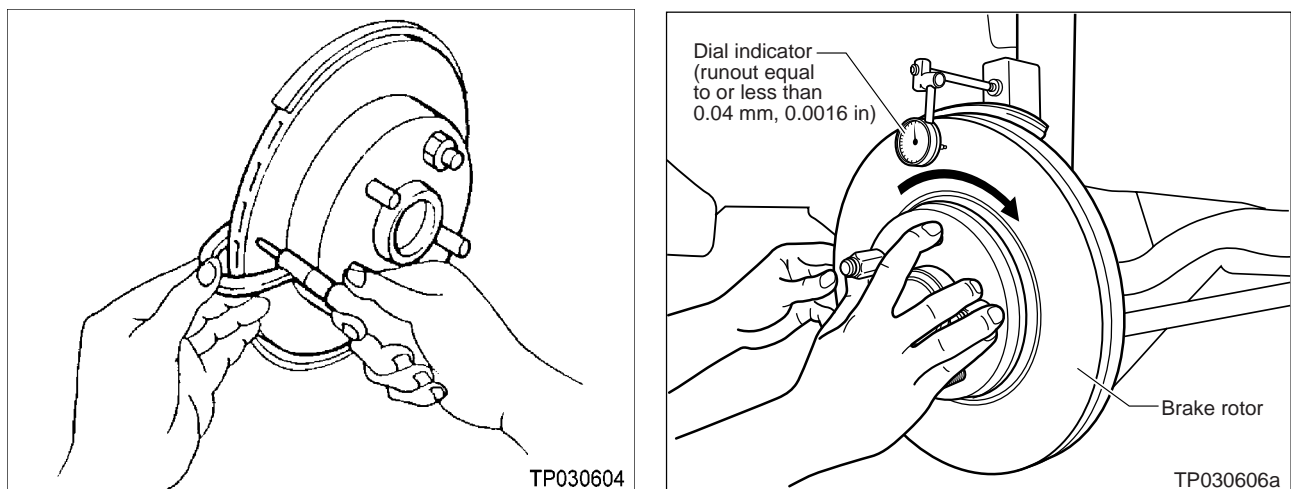


Figure 3

5. Reinstall the brake caliper assemblies.

- Refer to the ESM for brake caliper installation instructions
- **IMPORTANT:** Make sure to use **new** torque member anchor bolts. **Do not** reuse the old ones (see Figure 4).

Apply Special Grease to the Brake Pad Retainers

6. Clean the caliper assemblies.

- Remove any adhesive from the caliper and caliper pistons. Be careful not to damage the pistons or boots.
- Completely clean any dirt, brake dust, metal filings, or any other debris from the brake pad retainers.

7. Apply special grease to the brake pad retainers (see Figure 4 below and Figure 5 on the next page).

- Use Molykote® M-77, P/N 44003-7S000CM. This special grease is listed in the Parts Information.

Molykote® is a registered trademark of Dow Corning Corporation.

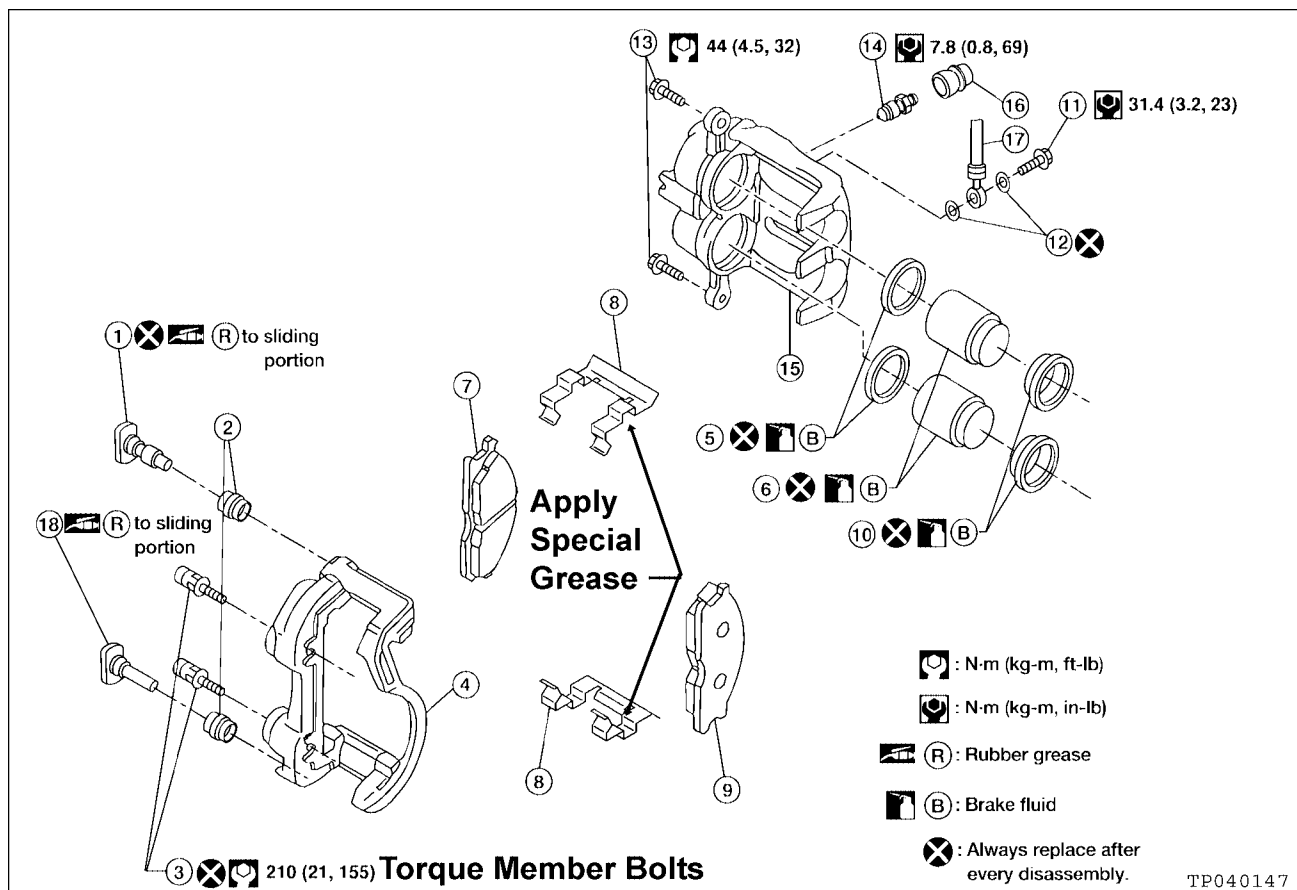


Figure 4

- | | | |
|----------------------|---------------------|-----------------------|
| 1. Upper sliding pin | 2. Sliding pin boot | 3. Torque member bolt |
| 4. Torque member | 5. Piston seal | 6. Piston |
| 7. Inner pad | 8. Pad retainer | 9. Outer pad |
| 10. Piston boot | 11. Union bolt | 12. Copper washer |
| 13. Sliding pin bolt | 14. Bleed valve | 15. Cylinder body |
| 16. Cap | 17. Brake hose | 18. Lower sliding pin |

IMPORTANT: Make sure to apply the special grease only to the brake pad retainers.

- Don't get grease on the brake pad surface or the rotor surface.

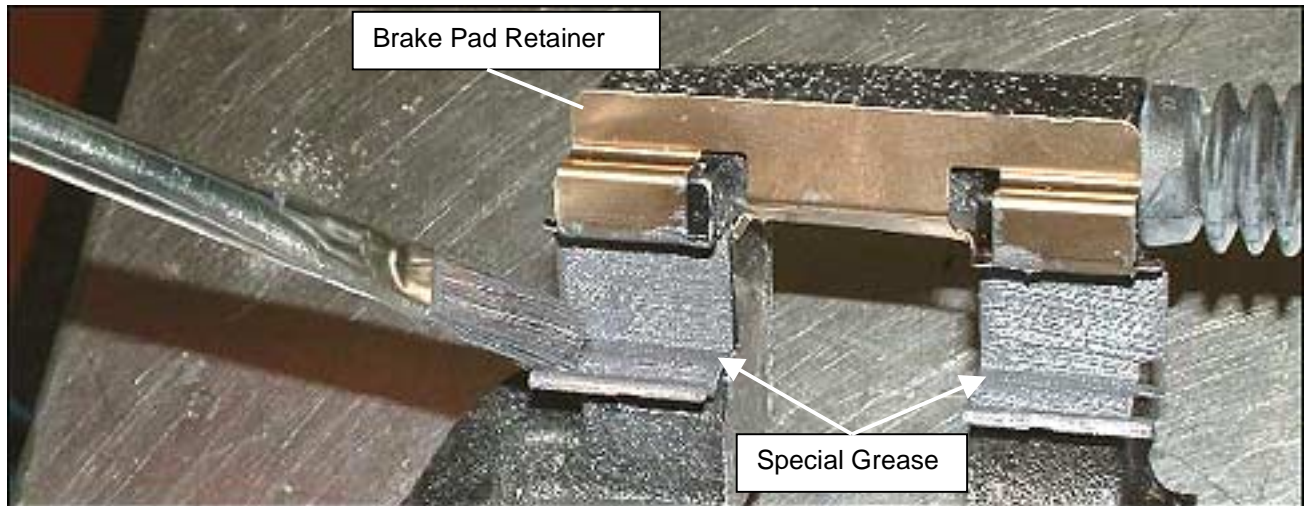


Figure 5

8. Replace the brake pads with new ones (see Parts Information and Figure 4 on the previous page).
 - Remove protective film from the brake pad backing insulators before installation.
 - Refer to the ESM for brake pad replacement instructions.
9. Reinstall the wheels and lug nuts. Tighten lug nuts to **133 N·m (14 kg·m, 98 ft-lb)** with a Torque Wrench.
 - Do Not tighten the wheel lug nuts with an air impact wrench.
 - If you apply uneven or high torque to the lugs it may “distort” the brake rotor and hub. This could cause increased rotor runout and excessive rotor thickness variation as the rotor wears.

Burnish The Brake Pads

10. Burnish the brake pads as follow:

- A. Drive the vehicle on a straight smooth road at about 30 mph (50 kph).
- B. Use medium brake pedal/foot effort to bring the vehicle to a complete stop from about 30 mph (50 kph). Adjust pedal/foot pressure so that the vehicle stopping time is 3-5 seconds.
- C. Cool the brake system by driving at about 30 mph (50 kph) for approximately one minute without stopping.
- D. Repeat steps A, B and C 10 times to complete the burnishing process.

Rotor Indexing

When installing a new rotor, use the following “indexing” procedure. This helps ensure a minimum amount of rotor runout.

1. Make sure the rotor is fully contacting the hub. Clean the rotor to hub surface if it is rusty.

NOTE: For cleaning the hub surface, specifically around the wheel studs, it is recommended to use the Wheel Hub Cleaning Kit #J-42450-A, which can be ordered from Nissan TECH-MATE at 1-800-662-2001.

2. Install the rotor and all lug nuts. Tighten the lug nuts to 40 ft-lbs.

3. Place a reference mark on the rotor and hub (see Figure 6).

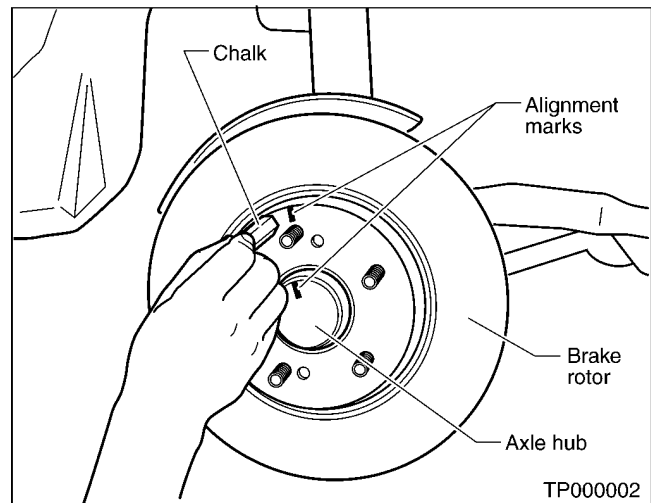


Figure 6

4. Measure rotor runout with a dial indicator (see Figure 7).

- If the runout is above 0.04 mm (0.0016), continue with step 5.

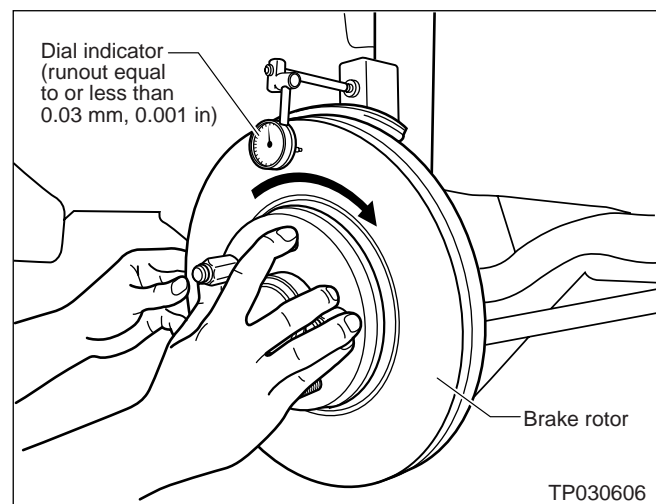


Figure 7

5. Remove the lug nuts and shift the position of the rotor one lug clockwise, then reinstall the lug nuts and torque to 40 ft-lbs.

- Repeat step 4 and 5 until the rotor is positioned with the least amount of runout.

6. After you find the position with the least amount of runout, if the runout is still more than 0.04 mm (0.0016in), you'll need to turn (resurface) the new rotors. See step 3 in the Service Procedure.

**DOW CORNING CORPORATION
Material Safety Data Sheet****MOLYKOTE(R) M-77 PASTE****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.: 01005103

Revision Date: 2003/05/27

Generic Description: Molybdenum disulfide grease
Physical Form: Paste
Color: Charcoal
Odor: Slight odor

NFPA Profile: Health 1 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

2. OSHA HAZARDOUS COMPONENTS

None present. This is not a hazardous material as defined in the OSHA Hazard Communication Standard.

3. EFFECTS OF OVEREXPOSUREAcute Effects

Eye: Direct contact may cause mild irritation.
Skin: No significant irritation expected from a single short-term exposure.
Inhalation: No significant effects expected from a single short-term exposure.
Oral: Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

Skin: Repeated or prolonged exposure may cause irritation.
Inhalation: No known applicable information.
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.

**DOW CORNING CORPORATION
Material Safety Data Sheet****MOLYKOTE(R) M-77 PASTE****4. FIRST AID MEASURES**

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

5. FIRE FIGHTING MEASURES

Flash Point:	Not applicable.
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 (CO ₂), 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 this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Quartz. Metal oxides. Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Sulfur oxides. Formaldehyde.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up:	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 absorbant 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.
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Note: See section 8 for Personal Protective Equipment for Spills. Call Dow Corning Corporation, (989) 496-5900, if additional information is required.

**DOW CORNING CORPORATION
Material Safety Data Sheet****MOLYKOTE(R) M-77 PASTE****7. HANDLING AND STORAGE**

Use with adequate ventilation. Traces of benzene (carcinogen) may form if heated in air above 300 F (149 C). Provide ventilation to control vapor exposure within inhalation guidelines when handling at elevated temperatures. Review the OSHA benzene regulation for detailed information on safe handling requirements. Avoid eye contact. Do not take internally.

Use reasonable care and store away from oxidizing materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Component Exposure Limits**

There are no components with workplace exposure limits.

Engineering Controls

Local Ventilation: None should be needed.
General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

Eyes: Use proper protection - safety glasses as a minimum.
Skin: Washing at mealtime and end of shift is adequate.
Suitable Gloves: No special protection needed.
Inhalation: No respiratory protection should be needed.
Suitable Respirator: None should be needed.

Personal Protective Equipment for Spills

Eyes: Use proper protection - safety glasses as a minimum.
Skin: Washing at mealtime and end of shift is adequate.
Inhalation/Suitable Respirator: No respiratory protection should be needed.
Precautionary Measures: Avoid eye contact. Do not take internally. Use reasonable care.
Comments: Traces of benzene (carcinogen) may form if heated in air above 300 F (149 C). Provide ventilation to control vapor exposure within inhalation guidelines when handling at elevated temperatures. Review the OSHA benzene regulation for detailed information on safe handling requirements.

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

MOLYKOTE(R) M-77 PASTE

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Paste
 Color: Charcoal
 Odor: Slight odor
 Specific Gravity @ 25°C: 1.9
 Viscosity: Not determined.
 Freezing/Melting Point: Not determined.
 Boiling Point: Not determined.
 Vapor Pressure @ 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.

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.

11. TOXICOLOGICAL INFORMATION

Special Hazard Information on Components

No known applicable information.

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

MOLYKOTE(R) M-77 PASTE

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.

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.

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.

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:

None.

Section 312 Hazard Class:

Acute: No
Chronic: No
Fire: No

TP040388

MOLYKOTE(R) M-77 PASTEPressure: No
Reactive: No**Section 313 Toxic Chemicals:**

None present or none present in regulated quantities.

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.

None known.

Massachusetts

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
1317-33-5	> 60.0	Molybdenum disulfide
7620-77-1	3.0 - 7.0	12-Hydroxy lithium stearate

New Jersey

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
1317-33-5	> 60.0	Molybdenum disulfide
63148-52-7	15.0 - 40.0	Dimethyl, phenylmethyl siloxane, trimethyl-terminated
7620-77-1	3.0 - 7.0	12-Hydroxy lithium stearate
14808-60-7	<1.0	Quartz

Pennsylvania

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
1317-33-5	> 60.0	Molybdenum disulfide
63148-52-7	15.0 - 40.0	Dimethyl, phenylmethyl siloxane, trimethyl-terminated
7620-77-1	3.0 - 7.0	12-Hydroxy lithium stearate

MOLYKOTE(R) M-77 PASTE**16. OTHER INFORMATION**

Prepared by: Dow Corning Corporation

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.

(R) indicates Registered Trademark