

# SAFETY DATA SHEET

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT

**Product Name:** MOBIL DYNAGEAR 2000  
**Product Description:** Base Oil and Additives  
**Product Code:** 19099, 2015A020R550  
**Intended Use:** Grease

### COMPANY IDENTIFICATION

**Supplier:** Canada Imperial Oil Limited, An Affiliate of Exxon Mobil Corporation  
P.O. Box 2480, Station M  
Calgary, ALBERTA. T2P 3M9 Canada  
**24 Hour Health Emergency:** 1-866-232-9563  
**Transportation Emergency Phone:** 1-866-232-9563  
**Supplier General Contact:** 1-800-567-3776

## SECTION 2 HAZARDS IDENTIFICATION

This material is not hazardous according to regulatory guidelines (see (M)SDS Section 15).

**Other hazard information:**

**HAZARD NOT OTHERWISE CLASSIFIED (HNOC):** None as defined under 29 CFR 1910.1200.

### PHYSICAL / CHEMICAL HAZARDS

No significant hazards.

### HEALTH HAZARDS

High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation.

### ENVIRONMENTAL HAZARDS

Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

<b>NFPA Hazard ID:</b>	Health: 0	Flammability: 1	Reactivity: 0
<b>HMIS Hazard ID:</b>	Health: 0	Flammability: 1	Reactivity: 0

**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

#### Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
GRAPHITE	7782-42-5	1 - < 5%	None
LONG-CHAIN ALKYL AMINE		0.1 - < 1%	H302, H311, H317, H330(2), H314(1B), H373, H400(M factor 1), H410(M factor 1)
MOLYBDENUM (IV) SULFIDE	1317-33-5	1 - < 5%	None
ZINC DITHIOPHOSPHATE	68649-42-3	1 - < 2.5%	H315, H318, H401, H411

\* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

### SECTION 4 FIRST AID MEASURES

#### INHALATION

Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

#### SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

#### EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

#### INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

### SECTION 5 FIRE FIGHTING MEASURES

#### EXTINGUISHING MEDIA

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight Streams of Water

Product Name: MOBIL DYNAGEAR 2000

Revision Date: 16 Mar 2015

Page 3 of 10

## FIRE FIGHTING

**Fire Fighting Instructions:** Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Hazardous Combustion Products:** Smoke, Fume, Sulfur oxides, Aldehydes, Oxides of carbon, Incomplete combustion products

## FLAMMABILITY PROPERTIES

**Flash Point [Method]:** >204°C (399°F) [EST. FOR OIL, ASTM D-92 (COC)]

**Flammable Limits (Approximate volume % in air):** LEL: N/D UEL: N/D

**Autoignition Temperature:** N/D

## SECTION 6

## ACCIDENTAL RELEASE MEASURES

### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

### PROTECTIVE MEASURES

Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: respiratory protection will be necessary only in special cases, e.g., formation of mists. Half-face or full-face respirator with filter(s) for dust/organic vapor or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to hydrocarbons are recommended. Gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

### SPILL MANAGEMENT

**Land Spill:** Scrape up spilled material with shovels into a suitable container for recycle or disposal.

**Water Spill:** Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Skim from surface.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

### ENVIRONMENTAL PRECAUTIONS

Prevent entry into waterways, sewers, basements or confined areas.

<b>SECTION 7</b>	<b>HANDLING AND STORAGE</b>
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**HANDLING**

Prevent small spills and leakage to avoid slip hazard.

**Static Accumulator:** This material is not a static accumulator.

**STORAGE**

Do not store in open or unlabelled containers. Keep away from incompatible materials.

<b>SECTION 8</b>	<b>EXPOSURE CONTROLS / PERSONAL PROTECTION</b>
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**EXPOSURE LIMIT VALUES**

**Exposure limits/standards (Note: Exposure limits are not additive)**

Substance Name	Form	Limit / Standard			NOTE	Source
GRAPHITE	Respirable fraction.	TWA	5 mg/m3		N/A	OSHA Z1
GRAPHITE	Total dust.	TWA	15 mg/m3		N/A	OSHA Z1
GRAPHITE	Respirable fraction.	TWA	2 mg/m3		N/A	ACGIH
MOLYBDENUM (IV) SULFIDE [as Mo]	Total dust.	TWA	15 mg/m3		N/A	OSHA Z1
MOLYBDENUM (IV) SULFIDE [as Mo]	Inhalable fraction.	TWA	10 mg/m3		N/A	ACGIH
MOLYBDENUM (IV) SULFIDE [as Mo]	Respirable fraction.	TWA	3 mg/m3		N/A	ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

No biological limits allocated.

**ENGINEERING CONTROLS**

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

**PERSONAL PROTECTION**

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

Product Name: MOBIL DYNAGEAR 2000

Revision Date: 16 Mar 2015

Page 5 of 10

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No protection is ordinarily required under normal conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

**Eye Protection:** If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

## ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

<b>SECTION 9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
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**Note:** Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

## GENERAL INFORMATION

**Physical State:** Solid  
**Form:** Semi-fluid  
**Color:** Dark Gray  
**Odor:** Characteristic  
**Odor Threshold:** N/D

## IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

**Relative Density (at 15 °C):** 1  
**Flammability (Solid, Gas):** N/A  
**Flash Point [Method]:** >204°C (399°F) [EST. FOR OIL, ASTM D-92 (COC)]  
**Flammable Limits (Approximate volume % in air):** LEL: N/D UEL: N/D  
**Autoignition Temperature:** N/D  
**Boiling Point / Range:** > 316°C (600°F)  
**Decomposition Temperature:** N/D  
**Vapor Density (Air = 1):** N/D

Product Name: MOBIL DYNAGEAR 2000

Revision Date: 16 Mar 2015

Page 6 of 10

**Vapor Pressure:** < 0.013 kPa (0.1 mm Hg) at 20 °C  
**Evaporation Rate (n-butyl acetate = 1):** N/D  
**pH:** N/A  
**Log Pow (n-Octanol/Water Partition Coefficient):** > 3.5  
**Solubility in Water:** Negligible  
**Viscosity:** 1440 cSt (1440 mm<sup>2</sup>/sec) at 40 °C  
**Oxidizing Properties:** See Hazards Identification Section.

#### OTHER INFORMATION

**Freezing Point:** N/D  
**Melting Point:** N/D  
**DMSO Extract (mineral oil only), IP-346:** < 3 %wt

NOTE: Most physical properties above are for the oil component in the material.

<b>SECTION 10</b>	<b>STABILITY AND REACTIVITY</b>
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**REACTIVITY:** See sub-sections below.

**STABILITY:** Material is stable under normal conditions.

**CONDITIONS TO AVOID:** Excessive heat. High energy sources of ignition.

**MATERIALS TO AVOID:** Strong oxidizers

**HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

**POSSIBILITY OF HAZARDOUS REACTIONS:** Hazardous polymerization will not occur.

<b>SECTION 11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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#### INFORMATION ON TOXICOLOGICAL EFFECTS

<b>Hazard Class</b>	<b>Conclusion / Remarks</b>
<b>Inhalation</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
<b>Ingestion</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
<b>Skin</b>	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
<b>Eye</b>	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
<b>Sensitization</b>	
Respiratory Sensitization: No end point data	Not expected to be a respiratory sensitizer.

Product Name: MOBIL DYNAGEAR 2000

Revision Date: 16 Mar 2015

Page 7 of 10

for material.	
Skin Sensitization: No end point data for material.	Not expected to be a skin sensitizer. Based on assessment of the components.
<b>Aspiration:</b> Data available.	Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.
<b>Germ Cell Mutagenicity:</b> No end point data for material.	Not expected to be a germ cell mutagen. Based on assessment of the components.
<b>Carcinogenicity:</b> No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
<b>Reproductive Toxicity:</b> No end point data for material.	Not expected to be a reproductive toxicant. Based on assessment of the components.
<b>Lactation:</b> No end point data for material.	Not expected to cause harm to breast-fed children.
<b>Specific Target Organ Toxicity (STOT)</b>	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: No end point data for material.	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

## OTHER INFORMATION

### For the product itself:

Component concentrations in this formulation would not be expected to cause skin sensitization, based on tests of the components or similar formulations.

### Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

The following ingredients are cited on the lists below: None.

### --REGULATORY LISTS SEARCHED--

1 = NTP CARC

2 = NTP SUS

3 = IARC 1

4 = IARC 2A

5 = IARC 2B

6 = OSHA CARC

## SECTION 12

## ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

### ECOTOXICITY

Material -- Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

### MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

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**PERSISTENCE AND DEGRADABILITY****Biodegradation:**

Base oil component -- Expected to be inherently biodegradable

**BIOACCUMULATION POTENTIAL**

Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

**SECTION 13****DISPOSAL CONSIDERATIONS**

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

**DISPOSAL RECOMMENDATIONS**

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Suitable routes of disposal are supervised incineration, preferentially with energy recovery, or appropriate recycling methods in accordance with applicable regulations and material characteristics at the time of disposal.

**REGULATORY DISPOSAL INFORMATION**

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

**Empty Container Warning** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. **DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.**

**SECTION 14****TRANSPORT INFORMATION**

**LAND (DOT):** Not Regulated for Land Transport

**LAND (TDG):** Not Regulated for Land Transport

**SEA (IMDG):** Not Regulated for Sea Transport according to IMDG-Code

**Marine Pollutant:** No



Product Name: MOBIL DYNAGEAR 2000  
 Revision Date: 16 Mar 2015  
 Page 9 of 10

**AIR (IATA):** Not Regulated for Air Transport

<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>
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**OSHA HAZARD COMMUNICATION STANDARD:** This material is not considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.

**Listed or exempt from listing/notification on the following chemical inventories:** AICS, DSL, KECI, TSCA

**EPCRA SECTION 302:** This material contains no extremely hazardous substances.

**SARA (311/312) REPORTABLE HAZARD CATEGORIES:** None.

**SARA (313) TOXIC RELEASE INVENTORY:**

Chemical Name	CAS Number	Typical Value
ZINC DITHIOPHOSPHATE	68649-42-3	1 - < 2.5%

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
GRAPHITE	7782-42-5	1, 4, 13, 16, 17, 18
HYDRO TREATED HEAVY NAPHTHENIC DISTILLATE	64742-52-5	13, 17, 18
MOLYBDENUM (IV) SULFIDE	1317-33-5	1, 4, 13, 16
NAPHTHENIC ACIDS, ZINC SALTS	12001-85-3	15
ZINC DITHIOPHOSPHATE	68649-42-3	13, 15, 17, 19

--REGULATORY LISTS SEARCHED--

- |               |                  |                   |             |
|---------------|------------------|-------------------|-------------|
| 1 = ACGIH ALL | 6 = TSCA 5a2     | 11 = CA P65 REPRO | 16 = MN RTK |
| 2 = ACGIH A1  | 7 = TSCA 5e      | 12 = CA RTK       | 17 = NJ RTK |
| 3 = ACGIH A2  | 8 = TSCA 6       | 13 = IL RTK       | 18 = PA RTK |
| 4 = OSHA Z    | 9 = TSCA 12b     | 14 = LA RTK       | 19 = RI RTK |
| 5 = TSCA 4    | 10 = CA P65 CARC | 15 = MI 293       |             |

Code key: CARC=Carcinogen; REPRO=Reproductive

<b>SECTION 16</b>	<b>OTHER INFORMATION</b>
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Product Name: MOBIL DYNAGEAR 2000

Revision Date: 16 Mar 2015

Page 10 of 10

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N/D = Not determined, N/A = Not applicable

**KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):**

H302: Harmful if swallowed; Acute Tox Oral, Cat 4

H311: Toxic in contact with skin; Acute Tox Dermal, Cat 3

H314(1B): Causes severe skin burns and eye damage; Skin Corr/Irritation, Cat 1B

H315: Causes skin irritation; Skin Corr/Irritation, Cat 2

H317: May cause allergic skin reaction; Skin Sensitization, Cat 1

H318: Causes serious eye damage; Serious Eye Damage/Irr, Cat 1

H330(2): Fatal if inhaled; Acute Tox Inh, Cat 2

H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2

H400: Very toxic to aquatic life; Acute Env Tox, Cat 1

H401: Toxic to aquatic life; Acute Env Tox, Cat 2

H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1

H411: Toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 2

**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:**

Updates made in accordance with implementation of GHS requirements.

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