

# MATERIAL SAFETY DATA SHEET

## TIMKEN OFF-HIGHWAY & CONSTRUCTION GREASE

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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**TRADE NAME** TIMKEN OFF-HIGHWAY AND CONSTRUCTION GREASE

**PRODUCT NO.** GR219

**SUPPLIER** The Timken Corporation  
1835 Dueber Ave.  
P.O. Box 6930  
Canton, OH 44706-0930

**EMERGENCY CONTACT** INFOTRAC  
Emergency Response Hotline  
1-800-535-5053 (US & Canada)  
1-800-323-3500

**DATE OF LAST ISSUE** January 7, 2009

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### 2. COMPOSITION, INFORMATION ON INGREDIENTS

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INGREDIENT NAME	CAS No.	WEIGHT
DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC	64741-88-4	10-30 %
RESIDUAL OILS, PETROLEUM. HYDROTREATED	64742-57-0	1-5 %
RESIDUAL OILS, PETROLEUM, SOLVENT-REFINED	64742-01-4	0-10 %
MOLYBDENUM SULFIDE (MoS <sub>2</sub> )	1317-33-5	1-5 %

#### COMPOSITION COMMENTS

Refer to section eight for exposure limits on ingredients.  
Chemical ingredients not regulated by OSHA or SARA are treated confidentially.

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### 3. HAZARDS IDENTIFICATION

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#### EMERGENCY OVERVIEW

#### ACUTE EFFECTS

**HEALTH HAZARDS, GENERAL** Exposure to vapors generated at high temperatures may cause respiratory irritation.

#### CHRONIC EFFECTS

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**SENSITIZATION** No known information.  
**CARCINOGENICITY** IARC: Not listed. OSHA: Not regulated. NTP: Not listed.

**HEALTH WARNINGS**

INHALATION. Heating can generate vapors that may cause respiratory irritation, nausea and headaches. Inhalation hazard at room temperature is unlikely due to the low volatility of this product. Inhalation of product vapor or mist may cause irritation of mucous membranes in nasal passages and throat. SKIN CONTACT. Repeated or prolonged contact can result in drying of the skin. EYE CONTACT. Irritating. INGESTION. Can cause stomach ache and vomiting. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.

**OTHER INFORMATION**

**ROUTE OF ENTRY** Inhalation. Skin and/or eye contact. Ingestion.  
**MEDICAL SYMPTOMS** MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not determined

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**4. FIRST AID MEASURES**

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**INHALATION** Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor of hot product, immediately remove from source of exposure. Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary. Get medical attention if any discomfort continues.  
**EYES** Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Contact physician if discomfort continues.  
**SKIN** Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.  
**INGESTION** DO NOT INDUCE VOMITING! Get medical attention immediately!

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**5. FIRE FIGHTING MEASURES**

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**FLASH POINT (°C)** 246 Cd OC (Cleveland open cup).  
**FLAMMABILITY LIMIT - LOWER(%)** N/D  
**FLAMMABILITY LIMIT - UPPER(%)** N/D  
**EXTINGUISHING MEDIA** Use: Carbon dioxide (CO2). Dry chemicals, sand, dolomite etc. Alcohol resistant foam. Water spray, fog or mist.  
**SPECIAL FIRE FIGHTING PROCEDURES** Use water to keep fire exposed containers cool and disperse vapors. Water spray may be used to flush spills away from exposures and dilute spills to non-flammable mixtures. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control.  
**UNUSUAL FIRE & EXPLOSION HAZARDS** Pressure will increase in over heated, closed containers.  
**HAZARDOUS COMBUSTION PRODUCTS** Acrid smoke/fumes. Oxides of: Carbon. Sulfur.

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**PROTECTIVE MEASURES IN CASE OF FIRE** Self-contained breathing equipment and chemical resistant clothing recommended.

## 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS** Minimize skin contact.

**PRECAUTIONS TO PROTECT THE ENVIRONMENT** Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with applicable government regulations.

**SPILL CLEAN-UP PROCEDURES** Contain spill. Absorb small amounts. Collect and return large amounts to shipping container. Rinse area with water.

## 7. HANDLING AND STORAGE

**HANDLING PRECAUTIONS** Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Do not reuse container. Keep lid closed when not in use. Do not store or mix with strong oxidizers. Avoid spilling, skin and eye contact. Eye wash and emergency shower must be available at the work place.

**STORAGE PRECAUTIONS** Store separate from strong acids and oxidizers. Keep away from heat, sparks and open flame.

**STORAGE CRITERIA** Chemical storage.

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

COMPONENT	STD	TWA	STEL	TWA	STEL
DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC	OSHA	5 mg/m3	N/E		
	ACGIH	5 mg/m3	10 mg/m3		
RESIDUAL OILS, PETROLEUM. HYDROTREATED	OSHA	5 mg/m3	N/E		
	ACGIH	5 mg/m3	10 mg/m3		
RESIDUAL OILS, PETROLEUM, SOLVENT-REFINED	OSHA	5 mg/m3	N/E		
	ACGIH	5 mg/m3	10 mg/m3		
MOLYBDENUM SULFIDE (MoS <sub>2</sub> )	OSHA	10 mg/m3	N/E		
	ACGIH	10 mg/m3	N/E		

### PROTECTIVE EQUIPMENT



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<b>ENGINEERING CONTROLS</b>	Use engineering controls to reduce air contamination to permissible exposure level.
<b>VENTILATION</b>	No specific ventilation requirements noted, but forced ventilation may still be required if air contamination exceeds acceptable level.
<b>RESPIRATORS</b>	No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
<b>PROTECTIVE GLOVES</b>	Chemical resistant gloves recommended to prevent prolonged or repeated contact.
<b>EYE PROTECTION</b>	Wear splash-proof eye goggles to prevent any possibility of eye contact.
<b>PROTECTIVE CLOTHING</b>	Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>HYGIENIC WORK PRACTICES</b>	Wash at the end of each work shift and before eating, smoking and using the toilet.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>APPEARANCE/PHYSICAL STATE</b>	Grease.		
<b>COLOR</b>	Gray.		
<b>ODOR</b>	Mild (or faint). Petroleum.		
<b>SOLUBILITY DESCRIPTION</b>	Insoluble in water.		
<b>DENSITY/SPECIFIC GRAVITY (g/ml)</b>	0.96	<b>Temperature (°C)</b>	16
<b>VAPOR DENSITY (air=1)</b>	> 5		
<b>VAPOR PRESSURE</b>	< 0.01 mmHg	<b>Temperature (°C)</b>	20
<b>EVAPORATION RATE</b>	< 1	<b>Reference</b>	BuAc=1
<b>pH-VALUE, CONC. SOLUTION</b>	N/A		

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## 10. STABILITY AND REACTIVITY

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<b>STABILITY</b>	Normally stable.
<b>CONDITIONS TO AVOID</b>	Avoid contact with acids and oxidizing substances.
<b>HAZARDOUS POLYMERIZATION</b>	Will not occur.
<b>POLYMERIZATION DESCRIPTION</b>	Not applicable
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Oxides of: Carbon. Sulfur.

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## 11. TOXICOLOGICAL INFORMATION

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<b>TOXICOLOGICAL INFORMATION</b>	No experimental toxicological data on the preparation as such is available.
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## 12. ECOLOGICAL INFORMATION

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**ECOLOGICAL INFORMATION**                      There is no ecological data on the product itself.

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## 13. DISPOSAL CONSIDERATIONS

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**DISPOSAL METHODS**                              Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations.

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## 14. TRANSPORT INFORMATION

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**DOT HAZARD CLASS**                              Not regulated.

**SEA TRANSPORT NOTES**                        Not regulated.

**AIR TRANSPORT NOTES**                        Not regulated.

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## 15. REGULATORY INFORMATION

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### US FEDERAL REGULATIONS

COMPONENT	SARA 302	CERCLA	SARA 313
DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC	N/A	N/A	N/A
RESIDUAL OILS, PETROLEUM. HYDROTREATED	N/A	N/A	N/A
RESIDUAL OILS, PETROLEUM, SOLVENT-REFINED	N/A	N/A	N/A
MOLYBDENUM SULFIDE (MoS <sub>2</sub> )	N/A	N/A	N/A

**REGULATORY STATUS**                              This Product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented):  
 TSCA: The ingredients of this product are on the TSCA Inventory.  
 SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.

### CLEAN AIR ACT

### US STATE REGULATIONS

**STATE REGULATORY STATUS**                      This product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented):. PROPOSITION 65: This product contains the following chemical(s) considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer or reproductive toxicity, and for which warnings are now required:

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1-Naphthylamine, CAS # 134-32-7, <1ppm  
 2-Naphthylamine, CAS # 91-59-8, <1ppm

**WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS**

**CONTROLLED PRODUCT CLASSIFICATION** Canadian WHMIS Classification:  
 Not a controlled product.

COMPONENT	INVENTORIES							
	CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC	DSL	Yes	EINECS	Yes	No	Yes	NAV	Yes
RESIDUAL OILS, PETROLEUM. HYDROTREATED	DSL	Yes	EINECS	NAV	NAV	NAV	NAV	NAV
RESIDUAL OILS, PETROLEUM, SOLVENT-REFINED	DSL	Yes	EINECS	Yes	No	Yes	NAV	Yes
MOLYBDENUM SULFIDE (MoS2)	DSL	Yes	NAV	NAV	NAV	NAV	NAV	NAV

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**16. OTHER INFORMATION**

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**HEALTH** Irritation, minor residual injury (1)

**FLAMMABILITY** Burns only if pre-heated (1).

**REACTIVITY** N/A (0).

**SPECIAL HAZARD** N/A

**NPCA HMIS HAZARD INDEX** Slight Hazard (1)

**NPCA HMIS PERS. PROTECT. INDEX** B

**PREPARED BY** James P. McBriarty

**DATE** 01-07-09

**DISCLAIMER** While the information and recommendations set forth herein are believed to be accurate as of the date thereof, The Timken Company makes no warranty with respect thereto and disclaims all liability from reliance therein.