

# MATERIAL SAFETY DATA SHEET

## TIMKEN FOOD SAFE GREASE

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>TRADE NAME</b>	TIMKEN FOOD SAFE GREASE
<b>PART No.</b>	GR231
<b>PRODUCT USE</b>	Food Grade Lubricating Grease
<b>SUPPLIER</b>	The Timken Corporation 1835 Dueber Ave P.O. Box 6930 Canton, OH 44706-0930 USA Tel: (330) 438-3000
<b>EMERGENCY TELEPHONE</b>	David Pierman

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS No.	WEIGHT
WHITE MINERAL OIL, PETROLEUM	8042-47-5	50-70 %
ZINC OXIDE (ZnO)	1314-13-2	10-20 %
1-DECENE, HOMOPOLYMER, HYDROGENATED (COMMON NAME: POLYALPHAOLEFINS)	68037-01-4	10-30 %
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	471-34-1	5-10 %
ALUMINUM COMPLEX THICKENER	Proprietary	5-10 %

<b>COMPOSITION COMMENTS</b>	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

<b>EMERGENCY OVERVIEW</b>	For further information, please refer to section 11.
<b>CARCINOGENICITY</b>	OSHA: Not regulated. NTP: Not listed. IARC: Not listed as a Group 1, 2A, or 2B agent.
<b>TERATOGENICITY</b>	No known information.
<b>HEALTH WARNINGS</b>	SKIN CONTACT. Slightly irritating. Repeated or prolonged contact can result in drying of the skin. EYE CONTACT. Irritating. 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. INGESTION. Can cause discomfort.
<b>ROUTE OF ENTRY</b>	Inhalation. Skin and/or eye contact. Ingestion.

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## 4. FIRST AID MEASURES

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<b>INHALATION</b>	Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary. Get medical attention if any discomfort continues.
<b>EYES</b>	Rinse with water. Contact physician if discomfort continues.
<b>SKIN</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
<b>INGESTION</b>	DO NOT INDUCE VOMITING! Get medical attention immediately!

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## 5. FIRE FIGHTING MEASURES

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<b>FLASH POINT (°C)</b>	> 177 (350°F) Cd OC (Cleveland open cup), based on lowest flash point of base oils.
<b>FLAMMABILITY LIMIT - LOWER(%)</b>	N/D
<b>FLAMMABILITY LIMIT - UPPER(%)</b>	N/D
<b>FLAMMABILITY CLASS</b>	No Uniform Fire Code noted.
<b>EXTINGUISHING MEDIA</b>	Use: Foam. Carbon dioxide (CO2). Dry chemicals, sand, dolomite etc.
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>	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.
<b>UNUSUAL FIRE &amp; EXPLOSION HAZARDS</b>	Volume and pressure increases strongly when heated. Risk of container explosion in fire.
<b>HAZARDOUS COMBUSTION PRODUCTS</b>	Acrid smoke/fumes. Oxides of: Carbon.
<b>PROTECTIVE MEASURES IN CASE OF FIRE</b>	Self-contained breathing equipment and chemical resistant clothing recommended.

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## 6. ACCIDENTAL RELEASE MEASURES

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<b>PERSONAL PRECAUTIONS</b>	Minimize skin contact.
<b>PRECAUTIONS TO PROTECT THE ENVIRONMENT</b>	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.
<b>SPILL CLEAN-UP PROCEDURES</b>	Non-hazardous substance. Collect in closed container.

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## 7. HANDLING AND STORAGE

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<b>HANDLING PRECAUTIONS</b>	Keep away from heat, sparks and open flame. Eye wash station should be available at the work place.
<b>STORAGE PRECAUTIONS</b>	Keep away from heat, sparks and open flame. Store separated from: Acids. Oxidizing

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materials.

**STORAGE CRITERIA**

Chemical storage.

**8. EXPOSURE CONTROLS, PERSONAL PROTECTION**

COMPONENT	STD	TWA	STEL	TWA	STEL
WHITE MINERAL OIL, PETROLEUM	OSHA			5 mg/m3 <sup>**</sup> (1)	
	ACGIH			5 mg/m3 <sup>**</sup> (1)	10 mg/m3 <sup>**</sup> (1)
ZINC OXIDE (ZnO)	OSHA			5 mg/m3 (resp)	
	ACGIH			2 mg/m3 (resp)	10 mg/m3 (resp)
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	OSHA			5 mg/m3 <sup>**</sup> (2)	
	ACGIH			10 mg/m3 <sup>**</sup> (e)	

**INGREDIENT COMMENTS**<sup>\*\*</sup>(1) For respirable oil mist.<sup>\*\*</sup>(2) For respirable dust. ACGIH TLV = 10 mg/m3 for total dust.<sup>\*\*</sup>ACGIH (e): Total dust, containing no asbestos and <1% crystalline silica**PROTECTIVE EQUIPMENT****ENGINEERING CONTROLS**

Use engineering controls to reduce air contamination to permissible exposure level.

**VENTILATION**

No specific ventilation requirements noted, but forced ventilation may still be required if air contamination exceeds acceptable level.

**RESPIRATORS**

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

**PROTECTIVE GLOVES**

Chemical resistant gloves required for prolonged or repeated contact. Use protective gloves made of: Rubber (natural, latex).

**EYE PROTECTION**

Wear splash-proof eye goggles to prevent any possibility of eye contact.

**PROTECTIVE CLOTHING**

Wear appropriate clothing to prevent repeated or prolonged skin contact.

**HYGIENIC WORK PRACTICES**

Wash at the end of each work shift and before eating, smoking and using the toilet.

**9. PHYSICAL AND CHEMICAL PROPERTIES****APPEARANCE/PHYSICAL STATE**

Grease.

**COLOR**

Light (or pale). White.

**ODOR**

Mild (or faint).

**SOLUBILITY DESCRIPTION**

Insoluble in water.

<b>DENSITY</b>	~ 0.89	<b>Temperature (°C)</b>	15.6 (60°F)
<b>VAPOR DENSITY (air=1)</b>	> 0.5		
<b>VAPOR PRESSURE</b>	< 0.01 mmHg	<b>Temperature (°C)</b>	20 (68°F)
<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 polymerize.
<b>POLYMERIZATION DESCRIPTION</b>	Not applicable
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Oxides of: Carbon.

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## 11. TOXICOLOGICAL INFORMATION

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**TOXICOLOGICAL INFORMATION** No experimental toxicological data on the preparation as such is available.

<b>COMPONENT</b>	<b>ZINC OXIDE (ZnO)</b>
<b>TOXIC DOSE - LD 50</b>	240 mg/kg (ipr-rat)
<b>TOXIC DOSE - LD 50</b>	7950 mg/kg (oral-mus)
<b>TOXIC CONC. - LC 50</b>	2500 mg/m <sup>3</sup> (inh-mam.)
<b>CARCINOGENICITY</b>	OSHA: Not regulated. NTP: Not listed. IARC: Not listed as a Group 1, 2A, or 2B agent. EPA Carcinogen Assessment Group List.

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## 12. ECOLOGICAL INFORMATION

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**ECOLOGICAL INFORMATION** No data on possible environmental effects have been found.

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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** Non-Hazardous (No label required).

<b>IDENTIFICATION No.</b>	N/A
<b>U.S. DOT HAZARD LABEL</b>	No DOT label requirement
<b>SEA TRANSPORT NOTES</b>	Not regulated per IMDG.
<b>AIR TRANSPORT NOTES</b>	Not regulated per IATA.

## 15. REGULATORY INFORMATION

<b>US FEDERAL REGULATIONS: COMPONENT</b>	<b>SARA 302</b>	<b>CERCLA</b>	<b>SARA 313</b>
WHITE MINERAL OIL, PETROLEUM	No	No	No
ZINC OXIDE (ZnO)	No	***	N982 - Zn
1-DECENE, HOMOPOLYMER, HYDROGENATED (COMMON NAME: POLYALPHAOLEFINS)	No	No	No
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	No	No	No
ALUMINUM COMPLEX THICKENER	No	No	No

\*\*\* Indicates that no RQ is assigned to this generic or broad class, although the class is a CERCLA hazardous substance. See 50 Federal Register 13456 (April 4, 1985). Values in Section 313 column represent Category Codes for reporting under Section 313.

<b>US STATE REGULATIONS: BY COMPONENT</b>	<b>CA</b>	<b>FL</b>	<b>MA</b>	<b>MN</b>	<b>NJ</b>	<b>PA</b>	<b>RI</b>
ZINC OXIDE (ZnO)					Yes	EH	

**STATE REGULATORY STATUS** PROPOSITION 65: This product may contain 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:  
Cadmium, <1ppm  
Lead, <1ppm

<b>INVENTORIES: COMPONENT</b>	<b>CAN</b>	<b>US</b>	<b>EU</b>	<b>AUS</b>	<b>JAP</b>	<b>KOR</b>	<b>CHN</b>	<b>PHLP</b>
WHITE MINERAL OIL, PETROLEUM	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
ZINC OXIDE (ZnO)	NPRI	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
1-DECENE, HOMOPOLYMER, HYDROGENATED (COMMON NAME: POLYALPHAOLEFINS)	DSL	Yes	Polymer	Yes	Yes	Yes	Yes	Yes
ALUMINUM COMPLEX THICKENER	DSL	Yes	EINECS	Yes			Yes	
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes

## 16. OTHER INFORMATION

<b>NFPA-HMIS: HEALTH</b>	Irritation, minor residual injury (1) - HMIS/NFPA
<b>NFPA-HMIS: FLAMMABILITY</b>	Burns only if pre-heated (1) - HMIS/NFPA
<b>NFPA-HMIS: REACTIVITY</b>	Normally Stable (0) - HMIS/NFPA

**HMIS PERSONAL PROTECTION  
INDEX**

A - Safety Eyewear

**PREPARED BY**

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**DATE**

2004-05-06

**PRINTING DATE:**

2005-04-08

**DISCLAIMER**

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