

TIMKEN**SAFETY DATA SHEET****1. Identification of the product****GHS product identifier** Timken GR231**Other means of identification** None.**Recommended use of the chemical and restrictions on use****Recommended use** Lubricating grease.**Recommended restrictions** For industrial use only.**Suppliers details****Company name** The Timken Company
Address 4500 Mount Pleasant Street NW
North Canton, OH 44720
United States**Telephone** (234) 262-3000**E-mail** Not available.**Contact person** INFOTRAC**Emergency phone number** 1-800-535-5053**2. Hazard identification****Classification of the substance or mixture****Physical hazards** Not classified.**Health hazards** Reproductive toxicity (the unborn child,) Category 2**Environmental hazards** Not classified.**GHS label elements, including precautionary statements****Signal word** Warning**Hazard statement**

H361 Suspected of damaging the unborn child.

Precautionary statement**Prevention**P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/protective clothing/eye protection/face protection.**Response**

P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification None known.**Supplemental information** None.**3. Composition/information on ingredients****Mixtures**

Chemical identity	Common name(s), synonym(s)	CAS number and other unique identifiers	Concentration
White mineral oil (Viscosity >7 =<20.5 mm ² /s)		8042-47-5	77.24
Zinc sulfide		1314-98-3	3.3
Alkylated phosphorothioate		192268-65-8	0.5
Triphenyl phosphorothionate		597-82-0	0.5

Composition comments All concentrations are in percent by weight. Components not listed are either non-hazardous or are below reportable limits.

4. First-aid measures

Description of necessary first-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed Suspected of damaging the unborn child.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety d

5. Fire-fighting measures

Suitable extinguishing media	Foam. Dry chemicals. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective actions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Cool containers exposed to heat with water spray and remove container, if no risk is involved.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Will burn if involved in a fire. No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear appropriate personal protective equipment.
For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containment and cleaning up The product is immiscible with water and will spread on the water surface. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS. The product is insoluble in water.

7. Handling and storage

Precautions to ensure safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat and sources of ignition. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Costa Rica. OELs (Regulation for the Registration of Hazardous Products, Executive Decree No. 28113S, as amended by Executive Decree No. 30718, Oct 2, 2002) updated with ACGIH

Components	Type	Value
White mineral oil (Viscosity >7 =<20.5 mm ² /s) (CAS 8042-47-5)	TWA	5 mg/m ³

Nicaragua. OELs (General Law of Workplace Hygiene and Safety. Law No. 618, published in Official Gazette No. 133, July 13, 2007) as updated with ACGIH, as updated through ACGIH

Components	Type	Value	Form
White mineral oil (Viscosity >7 =<20.5 mm ² /s) (CAS 8042-47-5)	TWA	5 mg/m ³	Inhalable fraction.

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
White mineral oil (Viscosity >7 =<20.5 mm ² /s) (CAS 8042-47-5)	TWA	5 mg/m ³	Inhalable fraction.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Control banding approach

Not applicable.

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If expos

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. 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

9. Physical and chemical properties

Appearance

Physical state

Solid.

Form

Grease.

Color

Colorless.

Odor

Mild. Petroleum solvent.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range	Not available.
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	180 cSt
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
White mineral oil (Viscosity >7 =<20.5 mm ² /s) (CAS 8042-47-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 5 mg/l
Oral		
LD50	Rat	> 5000 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
ACGIH Carcinogens	
White mineral oil (Viscosity >7 =<20.5 mm ² /s) (CAS 8042-47-5)	A4 Not classifiable as a human carcinogen.
Costa Rica OELs: Carcinogen	
White mineral oil (Viscosity >7 =<20.5 mm ² /s) (CAS 8042-47-5)	Not classifiable as a human carcinogen.
IARC Monographs. Overall Evaluation of Carcinogenicity	
White mineral oil (Viscosity >7 =<20.5 mm ² /s) (CAS 8042-47-5)	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	Suspected of damaging the unborn child.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Other information	None known.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
White mineral oil (Viscosity >7 =<20.5 mm ² /s) (CAS 8042-47-5)		
Aquatic		
<i>Acute</i>		
Crustacea	LL50	Invertebrates (Invertebrates) 100 mg/l
Fish	LL50	Fish 10 mg/l

Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
Bioaccumulative potential	No data available.
Mobility in soil	The product is insoluble in water. Expected to have low mobility in soil.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

ANTT

Not regulated as dangerous goods.

DOT

Not regulated as dangerous goods.

SCT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

International regulations

Montreal Protocol

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Revision date

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List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists.
 ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
 ANTT: National Agency of Land Transport.
 CAS: Chemical Abstract Service.
 DOT: Department of Transportation.
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
 IARC: International Agency for Research on Cancer.

IATA: International Air Transport Association.

IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.

IMDG: International Maritime Dangerous Goods.

MARPOL: International Convention for the Prevention of Pollution from Ships.

NFPA: National Fire Protection Association.

SCT: Secretariat of Communications and Transportation (NOM-002-SCT/2011).

STEL: Short term exposure limit.

TWA: Time Weighted Average.

Workplace Threshold Quantities of Hazardous Chemicals

References

Disclaimer

The Timken Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, sto