



# SAFETY DATA SHEET

## 1. Identification

**Name of the substance or mixture (trade name)** Timken GR231  
**Major recommended uses for the substance or mixture** Lubricating grease.  
**Specific restrictions for use of the substance or mixture** For industrial use only.

### Manufacturer/Importer/Distributor information

#### Manufacturer

**Company name** The Timken Company  
**Address** 4500 Mount Pleasant Street NW  
North Canton, OH 44720  
United States  
**Telephone** (234) 262-3000  
**Website**  
**Contact person** INFOTRAC  
**Emergency telephone number** 1-800-535-5053

## 2. Hazards identification

### Classification of the substance or mixture

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.

### GHS labeling elements, including precautionary statements

**Hazard symbol(s)** None.  
**Signal word** None.  
**Hazard statement(s)** The mixture does not meet the criteria for classification.  
**Precautionary statement(s)**  
**Prevention** Not assigned.  
**Response** Not assigned.  
**Storage** Not assigned.  
**Disposal** Not assigned.

**Other hazards which do not result in classification** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixture

Common chemical name or technical name	CAS number	Concentration or concentration range
White mineral oil (Viscosity >7 =<20.5 mm <sup>2</sup> /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

### First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	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

Direct contact with eyes may cause temporary irritation.

### Personal protection for first-aid responders

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### Notes to physician

Treat symptomatically.

## 5. Fire-fighting measures

### Means of fire extinguishing

<b>Suitable extinguishing media</b>	Foam. Dry chemicals. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	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 fire fighting procedures

Cool containers exposed to heat with water spray and remove container, if no risk is involved.

### Protective measures taken by firefighting crews

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

### 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. Control measures for spills and leaks

### Personal precautions, protective equipment and emergency procedures

**To be taken by those who are not involved in rendering emergency services** Wear appropriate personal protective equipment.

**To be taken by those who are involved in rendering emergency services** Keep unnecessary personnel away. 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 for safe handling

Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas.

### Conditions for safe storage, including any incompatibilities

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

Follow standard monitoring procedures.

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values (TLV)

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

**Colombia. OELs. Resolution No. 02400: Norms Concerning Working Conditions, Health and Safety in the Workplace, as updated through ACGIH**

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

**Ecuador. OELs (INEN 2266:2013, 2013-01 2nd rev.: Transport, storage and handling of hazardous materials. Requirements. 1st ed., 1/29, 2013), as updated through ACGIH**

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

**Paraguay. Decree No. 14.390/92 that approves the General Technical Regulation of Safety, Hygiene and Medicine in the Workplace**

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

**Peru. OELs. Decreto Supremo 015-2005-SA (Reglamento sobre Valores Limites Permisibles para Agentes Químicos en el Ambiente de Trabajo)**

Components	Type	Value	Form
White mineral oil (Viscosity >7 =<20.5 mm <sup>2</sup> /s) (CAS 8042-47-5)	STEL	10 mg/m <sup>3</sup>	Mist.
	TWA	5 mg/m <sup>3</sup>	Mist.

**Venezuela. VTRE (Technical Reference Exposure Values, Table 1, FONDONORMA 2253)**

Components	Type	Value	Form
White mineral oil (Viscosity >7 =<20.5 mm <sup>2</sup> /s) (CAS 8042-47-5)	STEL	10 mg/m <sup>3</sup>	Mist.

**Biological limit values**

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

**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

**Personal protective measures****Eyes and face protection**

Wear safety glasses with side shields (or goggles).

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear suitable protective clothing.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**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.

**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.

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

## 10. Stability and reactivity

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

## 11. Toxicological information

### Information on likely routes of exposure

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

**Symptoms** Direct contact with eyes may cause temporary irritation.

**Acute toxicity** Not expected to be acutely toxic.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
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White mineral oil (Viscosity >7 =<20.5 mm<sup>2</sup>/s) (CAS 8042-47-5)

**Acute**

**Dermal**

LD50	Rabbit	> 2000 mg/kg
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**Inhalation**

LC50	Rat	> 5 mg/l
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**Oral**

LD50	Rat	> 5000 mg/kg
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**Skin irritation and corrosion** 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<sup>2</sup>/s) (CAS 8042-47-5) A4 Not classifiable as a human carcinogen.

### Colombia. OELs. Resolution No. 02400: Norms Concerning Working Conditions, Health and Safety in the Workplace

White mineral oil (Viscosity >7 =<20.5 mm<sup>2</sup>/s) (CAS 8042-47-5) A4 Not classifiable as a human carcinogen.

### Ecuador. OELs (INEN 2266:2013, 2013-01 2nd rev.: Transport, storage and handling of hazardous materials. Requirements. 1st ed., 1/29, 2013)

White mineral oil (Viscosity >7 =<20.5 mm<sup>2</sup>/s) (CAS 8042-47-5) Group A4 Not classifiable as a human carcinogen.

### IARC Monographs. Overall Evaluation of Carcinogenicity

White mineral oil (Viscosity >7 =<20.5 mm<sup>2</sup>/s) (CAS 8042-47-5) 3 Not classifiable as to carcinogenicity to humans.

### Paraguay. Decree No. 14.390/92 that approves the General Technical Regulation of Safety, Hygiene and Medicine in the Workplace

White mineral oil (Viscosity >7 =<20.5 mm<sup>2</sup>/s) (CAS 8042-47-5) A4 Not classifiable as a human carcinogen.

**Toxic to reproduction** Based on available data, the classification criteria are not met. The product contains a small amount of a substance that is suspected of damaging fertility or 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.

**Chronic effects** Prolonged inhalation may be harmful.

**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 <sup>2</sup> /s) (CAS 8042-47-5)		
<b>Aquatic</b>		
<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.

**Partition coefficient n-octanol / water (log K<sub>ow</sub>)** Not available.

**Bioconcentration factor (BCF)** Not available.

**Mobility in soil** The product is immiscible with water and will spread on the water surface. Not expected to be mobile 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. Considerations on final disposal

### Recommended methods for final destination

**Residual waste** 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).

<b>Contaminated packaging</b>	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.
<b>Local disposal regulations</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

## 14. Transport information

### National regulations

#### ANTT

Not regulated as dangerous goods.

### International regulations

#### 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

### Federal regulations

**Colombia. Controlled Substances (Resolution No. 009 of 1987 nationally regulating the transport & use of substances in subparag. f) of article 20 of Law 30 of 1986, as amended)**

Not listed.

### International regulations

#### Montreal Protocol

Not applicable.

#### Stockholm Convention

Not applicable.

#### Rotterdam Convention

Not applicable.

#### Kyoto Protocol

Not applicable.

#### Basel Convention

Not applicable.

## 16. Other information

**Significant information, yet not specifically related to the previous sections** Not available.

### Legends and abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists.  
ANTT: National Agency of Land Transport.  
CAS: Chemical Abstract Service.  
IARC: International Agency for Research on Cancer.  
IATA: International Air Transport Association.  
IBC Code: Interna

### 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