



SAFETY DATA SHEET

TIMKEN SYNTHETIC INDUSTRIAL GREASE

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Product name	TIMKEN SYNTHETIC INDUSTRIAL GREASE
Product number	GR 232
Applications	Lubricating Grease
Supplier	The Timken Corporation 1835 Dueber Ave. P.O. Box 6930 Canton, OH 44706-0930 USA Tel: (330) 438-3000
Emergency telephones	INFOTRAC U.S. and Canada - (800) 535-5053 Outside the U.S. and Canada - +01-352-323-3500
Date of last issue	2009-04-01

2. COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC no.	CAS no.	Content	Symbol	R-phrases
1-DECENE, HOMOPOLYMER, HYDROGENATED	Polymer	68037-01-4	60-80 %	-	
LITHIUM COMPLEX THICKENER	Proprietary	Proprietary	10-20 %	-	
FATTY ACIDS, C18-UNSATD., DIMERS, POLYMERS W/ 2-ETHYLHEXANOL & NEOPENTYL GLYCOL	Polymer	68552-19-2	3-7 %	-	
Tris(dialkyldithiocarbamate-S,S')antimony	Proprietary	Proprietary	0.5-1.5 %	Xn ,N	R-20/22, 51/53

See section 16 for explanations of R-phrases

Composition comments Refer to section eight for exposure limits on ingredients.

3. HAZARDS IDENTIFICATION

Exposure to vapors generated at high temperatures, may cause respiratory irritation.
May cause irritation to eyes and skin.

4. FIRST AID MEASURES

Inhalation	Move the exposed person to fresh air at once. For breathing difficulties oxygen could be necessary. Get medical attention if any discomfort continues.
Ingestion	DO NOT INDUCE VOMITING! Get medical attention immediately! Promptly get affected personnel to drink large volumes of water to dilute the swallowed chemical. Do not give milk or oil. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues. INJECTION INJURY WARNING: 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.
Eyes	Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing media	Water spray, fog or mist. Foam. Carbon dioxide (CO ₂). Dry chemicals, sand, dolomite etc.
Special firefighting procedures	Use water to keep fire-exposed containers cool and disperse vapours. Water spray could 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.
Specific hazards	If heated, volume and pressure increases strongly, resulting in explosion of container.
Hazardous combustion products	Acrid smoke/fumes. Oxides of: Carbon. Phosphorus.
Protective measures in the event of fire	Self-contained breathing equipment and chemical resistant clothing recommended.

6. ACCIDENTAL RELEASE MEASURES

Personal protection	Minimize skin contact. Avoid breathing vapors; wear appropriate respirator. Remove sources of ignition. Wear suitable eye protection.
Environmental protection	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 methods	Ventilate well. Wear necessary protective equipment. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Do not let washing down water contaminate ponds or waterways. Flush area with water.

7. HANDLING AND STORAGE

Usage precautions	Keep away from heat, sparks and open flame. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Containers should be kept tightly closed. Avoid spilling, skin and eye contact. Eye wash facilities and
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emergency shower must be available when handling this product.

Storage precautions

Keep away from heat, sparks and open flame. Store separated from: Acids. Oxidizer.

Storage criteria

Storage of chemicals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

Ingredient name	CAS no.	Reference	LT Exp 8 Hrs	ST Exp 15 Min
Tris(dialkyldithiocarbamate-S,S')antimony	Proprietary	MEL.	0,5 mg/m ³	

Protective equipment**Process conditions**

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

Ventilation

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

Respirators

No specific recommendation made, but respiratory protection could 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: Neoprene, nitrile, polyethylene or PVC.

Eye protection

Use eye protection.

Other protection

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	Grease.		
Colour	Purple.		
Odour	Mild (or faint). Petroleum.		
Solubility description	Insoluble in water.		
Specific gravity	0.90		
Vapour density (air=1)	> 5		
Vapour pressure	< 0.1 mmHg	Temperature (°C)	20 (68°F)
Evaporation rate	< 0.01	Reference	BuAc=1
pH-value, conc. solution	N/A		

Flash point (°C)	266C (511°F)	Method	Estimated
Flammability limit (%)	N/D - N/D		

10. STABILITY AND REACTIVITY

Stability	Normally stable.
Conditions to avoid	Avoid contact with acids and oxidizers.
Hazardous polymerization	Will not polymerize.
Hazardous decomposition products	Oxides of: Carbon. Phosphorus.

11. TOXICOLOGICAL INFORMATION

Sensitization	No known information.
Genotoxicity	No known information.
Carcinogenicity	IARC Not Listed. OSHA Not Regulated. NTP Not Listed.
Reproductive toxicity	No known information.
Inhalation	Inhalation hazard at room temperature is unlikely due to the low volatility of this product. Heating can generate vapors that may cause respiratory irritation, nausea and headaches.
Ingestion	Could cause stomach pain or vomiting.
Skin	Prolonged or repeated contact leads to drying of skin.
Eyes	May be slightly irritating to eyes.
Route of entry	Inhalation. Skin and/or eye contact. Ingestion.
Target organs	Skin. Mucous membranes. Eyes.

COMPONENT: 1-DECENE, HOMOPOLYMER, HYDROGENATED

Toxic dose - LD50:	> 2,000 mg/kg (oral rat)
Toxic dose - LD50 (skin):	> 2,000 mg/kg (skin rabbit)
Toxic conc. - LC50:	> 5 mg/l

COMPONENT: LITHIUM COMPLEX THICKENER

Toxic dose - LD50:	> 5000 mg/kg (oral rat)
Toxic dose - LD50 (skin):	> 3000 mg/kg (skin rabbit)
Toxic conc. - LC50:	n/a.

COMPONENT: FATTY ACIDS, C18-UNSATD., DIMERS, POLYMERS W/ 2-ETHYLHEXANOL & NEOPENTYL GLYCOL

Toxic dose - LD50:	n/a.
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Toxic conc. - LC50: n/a.

COMPONENT: Tris(dialkyldithiocarbamato-S,S')antimony

Toxic conc. - LC50: 100 ppm/-- (inhalation rat)

12. ECOLOGICAL INFORMATION

Ecotoxicity No data on possible environmental effects have been found.

COMPONENT: 1-DECENE, HOMOPOLYMER, HYDROGENATED

COMPONENT: LITHIUM COMPLEX THICKENER

COMPONENT: FATTY ACIDS, C18-UNSATD., DIMERS, POLYMERS W/ 2-ETHYLHEXANOL & NEOPENTYL GLYCOL

COMPONENT: Tris(dialkyldithiocarbamato-S,S')antimony

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

ROAD TRANSPORT (ADR):

UN no. road N/A

ADR class Not dangerous according to ADR.

SEA TRANSPORT (IMDG):

Sea transport notes Not regulated per IMDG.

AIR TRANSPORT (IATA/ICAO):

Air transport notes Not regulated per IATA.

15. REGULATORY INFORMATION

HAZARD LABELLING:

Risk phrases Classification per manufacturer.
R-22 Harmful if swallowed.
R-36/37/38 Irritating to eyes, respiratory system and skin.
R-52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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INVENTORIES:

CANADA (DSL)	All components in this product are listed on the Canada Domestic Substances List (DSL) or are exempt from DSL requirements.
EUROPE (EINECS/ELNICS/NLP)	All components in this product are listed on the European Inventory of New and Existing Chemical Substances (EINECS), the European List of Notified Chemical Substances (ELINCS), or the No Longer Polymers (NLP) list, or are exempt from EU listing requirements.
JAPAN (ENCS)	This product contains one or more components that are NOT LISTED on the Japan Inventory of Existing and New Chemical Substances (ENCS) and are NOT EXEMPT from ENCS requirements.
PHILIPPINES (PICCS)	This product contains one or more components that are NOT LISTED on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) and are NOT EXEMPT from PICCS requirements.
USA (TSCA)	All components in this product are listed on the US Toxic Substances Control Act (TSCA) Inventory or are exempt from TSCA Inventory requirements.
AUSTRALIA (AICS)	All components in this product are listed on the Australian Inventory of Chemical Substances (AICS) or are exempt from AICS requirements.
KOREA (ECL)	All components in this product are listed on the Korea Existing Chemicals List (ECL) or are exempt from KECL requirements.
CHINA (IECS)	All components in this product are listed on the China Inventory of Existing Chemical Substances (IECS) or are exempt from IECS requirements.

16. OTHER INFORMATION

Explanations of R-phrases in Section 2	R-20/22 Harmful by inhalation and if swallowed. R-51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
* Information revised since previous SDS version	
Tariff Code	3403.19.0000 Lubricating preparations (including cutting-oil preparations, bolt or nut release preparations, antirust or anticorrosion preparations and mold release preparations, based on lubricants) and preparations of a kind used for the oil or grease treatment of textile materials, leather, furskins or other materials, but excluding preparations containing, as basic constituents, 70 percent or more by weight of petroleum oils or oils obtained from bituminous minerals: Containing petroleum oils or oils obtained from bituminous minerals: Other
Issued by	Regulatory Department
Date	2009-04-01
Disclaimer	While the information and recommendations set forth herein are believed to be accurate as of the date thereof, Chemtool Incorporated makes no warranty with respect thereto and disclaims all liability from reliance therein.
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