

MATERIAL SAFETY DATA SHEET

TIMKEN PILLOW BLOCK GREASE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME TIMKEN BALL BEARING PILLOW BLOCK GREASE

PRODUCT No. GR220

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)
1-352-323-3500

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2. COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS No.	WEIGHT
DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC	64741-88-4	0-90 %
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC	64742-54-7	0-90 %
RESIDUAL OILS, PETROLEUM, SOLVENT-REFINED	64742-01-4	0-10 %
PHOSPHATE ESTER AMINE SALTS		1-5 %

COMPOSITION COMMENTS

Refer to section eight for exposure limits on ingredients.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Under normal conditions of use, this product is not considered hazardous according to regulatory guidelines (See section 15).

Blue Grease. DOT ERG No. : NA

ACUTE EFFECTS**HEALTH HAZARDS, GENERAL**

Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin, or respiratory irritation.

CHRONIC EFFECTS**HEALTH WARNINGS****OTHER INFORMATION****MEDICAL INFORMATION**

For further health effects / toxicological data, see Section 11.

4. FIRST AID MEASURES

INHALATION

Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with mechanical device or use mouth-to-mouth resuscitation.

EYES

Flush thoroughly with water. If irritation occurs, call a physician.

SKIN

Wash contact areas with soap and water. Remove and clean oil soaked clothing daily and wash affected area. **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.

INGESTION

Not expected to be a problem. Seek medical attention if discomfort occurs. Do not induce vomiting.

5. FIRE FIGHTING MEASURES

FLASH POINT (°C)

> 204 Cd OC (Cleveland open cup).

FLAMMABILITY LIMIT - LOWER(%)

NE

FLAMMABILITY LIMIT - UPPER(%)

NE

EXTINGUISHING MEDIA

Carbon dioxide, foam, dry chemical, and water fog.

SPECIAL FIRE FIGHTING PROCEDURES

Water or foam may cause frothing. Use water to keep fire exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

UNUSUAL FIRE & EXPLOSION HAZARDS

No unusual fire or explosion hazards noted.

HAZARDOUS COMBUSTION PRODUCTS

Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

PROTECTIVE MEASURES IN CASE OF FIRE

For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	See section 8.
PRECAUTIONS TO PROTECT THE ENVIRONMENT	Prevent material from entering sewers, water sources or low lying areas; advise the relevant authorities if it has, or if it contaminates soil / vegetation.
SPILL CLEAN-UP PROCEDURES	LAND SPILL: Shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by pumping or contain spilled material with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of adsorbed residues as directed in Section 13. WATER SPILL: Confine the spill immediately with booms. Warn other ships in the vicinity. Notify port and other relevant authorities. Remove from the surface by skimming or with suitable absorbents. If permitted by regulatory authorities, the use of suitable dispersants should be considered where recommended in local oil spill procedures.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS	High pressure injection under the skin may occur due to the rupture of pressurized lines. Always seek medical attention. No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.
HANDLING DESCRIPTION	Prevent small spills and leakages to avoid slip hazard.
STORAGE PRECAUTIONS	Keep containers closed when not in use. Do not store in open or unlabelled containers. Store away from strong oxidizing agents and combustible materials. Do not store near heat, sparks, flame, or strong oxidants. EMPTY CONTAINER WARNING: Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

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		
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC	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		

INGREDIENT COMMENTS	This product does not contain any components which have recognized exposure limits.
VENTILATION	Use adequate ventilation.
RESPIRATORS	No special requirements under ordinary conditions of use and with adequate ventilation.
EYE PROTECTION	Generally eye contact is unlikely with this type of material. If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.
PROTECTIVE CLOTHING	If prolonged or repeated skin contact is likely, oil impervious gloves should be worn. Good personal hygiene practices should always be followed.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE	Grease.		
COLOR	Blue.		
ODOR	Mild (or faint).		
PHYSICAL DATA COMMENTS	Most physical properties for oil component.		
SOLUBILITY VALUE (g/100g H₂O 20°C)	Negligible		
BOILING POINT (°C, range)	> 330	Pressure	
MELT./FREEZ. POINT (°C, interval)	NE		
DENSITY/SPECIFIC GRAVITY (g/ml)	0.884	Temperature (°C)	4
VAPOR DENSITY (air=1)	NE		
VAPOR PRESSURE	< 0.1 mmHg	Temperature (°C)	20
EVAPORATION RATE	NE	Reference	
pH-VALUE, CONC. SOLUTION	NA		
VISCOSITY (interval)	95.0 cSt	Temperature (°C)	40
ODOR THRESHOLD, LOWER	NE		
ODOR THRESHOLD, UPPER	NE		
PARTITION COEFF. (log Pow)	> 3.5		
VOLATILE ORGANIC CONTENT	NE		

10. STABILITY AND REACTIVITY

STABILITY	(Thermal, light, etc.) stable
CONDITIONS TO AVOID	Extreme heat and high energy sources of ignition.
HAZARDOUS POLYMERIZATION	Will not occur.

MATERIALS TO AVOID	Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS	Product does not decompose at ambient temperature.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA	<p>Acute toxicity. LD50. Oral. Rat. Practically non-toxic >2000 mg/kg Based on similar products.</p> <p>Acute toxicity. LD50. Skin. Rabbit. Practically non-toxic >2000 mg/kg Based on similar products.</p> <p>Acute toxicity. LC50. Inhalation. Rat. Practically non-toxic >5 mg/l Based on similar products.</p> <p>Acute toxicity. Eye irritation test. Eye. Rabbit. Practically non-irritating Draize score: >6, but <15 Based on similar products.</p> <p>Acute toxicity. Skin. Rabbit. Practically non-irritating Primary irritation index: >0.5, but <3 Based on similar products.</p>
TOXICOLOGICAL INFORMATION	<p>CHRONIC TOXICOLOGY SUMMARY: Repeated and/or prolonged exposure may cause irritation to the skin, eyes or respiratory tract. For mineral base oils: Base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of severely treated oils showed no evidence of carcinogenic effects. These results are confirmed on a continuing basis using various screening methods such as Modified Ames Test, IP-346, and/or other analytical methods. For synthetic base oils: The base oils in this product have been tested in the Ames assay and other tests of mutagenicity with negative results. These base oils are not expected to be carcinogenic with chronic dermal exposures.</p>

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION	This environmental assessment was conducted using information on the individual components as no test data was available for this specific formulation.
BIOACCUMULATION	Not established.
ACUTE AQUATIC TOXICITY	The major components in the formulation show no aquatic toxicity at 1000 mg/L loading, therefore long-term adverse effects in the aquatic environment are not expected.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS	Product is suitable for burning in an enclosed, controlled burner for fuel value. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and
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consideration of product characteristics at time of disposal.

WASTE CLASSIFICATION

The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity. The unused product is not formulated with substances covered by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

14. TRANSPORT INFORMATION

CLASSIFICATION COMMENT

Not regulated by USA DOT.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

COMPONENT	SARA 302	CERCLA	SARA 313
DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC	N/A	N/A	N/A
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC	N/A	N/A	N/A
RESIDUAL OILS, PETROLEUM, SOLVENT-REFINED	N/A	N/A	N/A
PHOSPHATE ESTER AMINE SALTS	N/A	N/A	No

CLEAN AIR ACT

US STATE REGULATIONS

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHIMIS

COMPONENT	INVENTORIES							
	CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC	DSL	Yes	EINECS	Yes	No	Yes	NAV	Yes
DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC	DSL	Yes	NAV	NAV	NAV	NAV	NAV	NAV
RESIDUAL OILS, PETROLEUM, SOLVENT-REFINED	DSL	Yes	EINECS	Yes	No	Yes	NAV	Yes
PHOSPHATE ESTER AMINE SALTS	NAV	Yes	NAV	NAV	NAV	NAV	NAV	NAV

16. OTHER INFORMATION

HEALTH

No health hazards specifically noted for fire situations (0).

FLAMMABILITY

Burns only if pre-heated (1).

REACTIVITY	N/A (0).
PREPARED BY	James P. McBriarty
DATE	01-07-09
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