

MATERIAL SAFETY DATA SHEET

MC 2048CMT

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME MC 2048CMT

PRODUCT DESCRIPTION LUBRICATING GREASE

Product number LXM2704000

PRODUCT USE Lubricating Grease

SUPPLIER
Steward Enterprise, Inc
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2. COMPOSITION AND INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS No.	WEIGHT
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	Mixture**(2)	70-85 %
*OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	7620-77-1	7-13 %
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	471-34-1	3-7 %
*PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	68649-42-3	1-5 %
*MOLYBDENUM SULFIDE (MoS ₂)	1317-33-5	1-5 %
*ANTIMONY DIALKYL DITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)	Proprietary	<0-0.5 %

* This chemical(s) is hazardous according to OSHA/WHIMIS criteria

COMPOSITION COMMENTS

Refer to section eight for exposure limits on ingredients.
Chemical ingredients not regulated by OSHA, SARA, state or federal agencies are treated confidentially. **(2) The base oil for this product can be a mixture of any of the following highly refined petroleum streams:
CAS 64741-88-4; CAS 64741-89-5; CAS 64741-96-4; CAS 64741-97-5; CAS 64742-01-4; CAS 64742-52-5; CAS 64742-53-6; CAS 64742-54-7; CAS 64742-55-8;

CAS 64742-56-9; CAS 64742-57-0; CAS 64742-62-7; CAS 64742-63-8; CAS 64742-65-0; CAS 72623-83-7; CAS 72623-85-9; CAS 72623-86-0; CAS 72623-87-1. Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, solvent dewaxing and hydrotreating to remove aromatics and improve performance characteristics. All petroleum base oils contained in this product meet the IP 346 criteria of less than 3 percent PAH's and are not considered carcinogens by IARC, NTP or OSHA.

** (7) The petroleum residual oils for this product can be a mixture of any of the following highly refined petroleum streams:

CAS NO 64742-01-4, CAS NO 64742-57-0, CAS NO 64742-62-7, CAS NO 64742-65-0 and CAS NO 72623-83-7. Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, solvent dewaxing and/or hydrotreating to remove aromatics and improve performance characteristics. None of the oils used are listed as a carcinogen by NTP, IARC, or OSHA.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Not regarded as a health hazard under current legislation.

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	May cause stomach pain or vomiting.
SKIN	Prolonged or repeated contact leads to drying of skin.
EYES	May be slightly irritating to eyes.
SENSITIZATION	No known information.
CARCINOGENICITY	IARC: Not listed as a Group 1, 2A, or 2B agent. OSHA: Not regulated. NTP: Not listed.
TERATOGENICITY	No known information.
HEALTH WARNINGS	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. SKIN CONTACT. Repeated or prolonged contact can result in drying of the skin. EYE CONTACT. Slightly irritating. INGESTION. Can cause stomach ache and vomiting.
ROUTE OF ENTRY	Inhalation. Skin and/or eye contact. Ingestion.

4. FIRST AID MEASURES

INHALATION	Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary. Get medical attention if any discomfort continues.
EYES	Rinse with water. Contact physician if discomfort continues.
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.

INGESTION

Get medical attention immediately! If vomiting occurs, lean forward to reduce the risk of aspiration.

5. FIRE FIGHTING MEASURES

FLASH POINT (°C)	232 (450°F) Cd OC (Cleveland open cup).
FLAMMABILITY LIMIT - LOWER(%)	N/D
FLAMMABILITY LIMIT - UPPER(%)	N/D
EXTINGUISHING MEDIA	Water spray, fog or mist. Foam. Carbon dioxide (CO ₂). Dry chemicals, sand, dolomite etc.
SPECIAL FIRE FIGHTING PROCEDURES	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. 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.
UNUSUAL FIRE & EXPLOSION HAZARDS	Volume and pressure increases strongly when heated. Risk of container explosion in fire.
HAZARDOUS COMBUSTION PRODUCTS	Acrid smoke/fumes. Oxides of: Carbon. Phosphorus. Sulfur.
PROTECTIVE MEASURES IN CASE OF FIRE	Self-contained breathing equipment and chemical resistant clothing recommended.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Minimize skin contact.
PRECAUTIONS TO PROTECT THE ENVIRONMENT	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 PROCEDURES	Provide good ventilation. Use appropriate protective clothing. Carefully collect spilled material in closed containers and leave for disposal according to local regulations. Do not let washing down water contaminate ponds or waterways. Rinse area with water.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS	Keep away from heat, sparks and open flame. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Containers should be kept tightly closed. Avoid spilling, skin and eye contact. Eye wash and emergency shower must be available at the work place.
STORAGE PRECAUTIONS	Keep away from heat, sparks and open flame. Store separated from: Acids. Oxidizing materials.
STORAGE CRITERIA	Chemical storage.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

COMPONENT	STD	TWA	STEL	TWA	STEL
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	OSHA			5 mg/m3 (oil mist)	
	ACGIH			5 mg/m3 (oil mist)	10 mg/m3 (oil mist)
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	OSHA	10 mg/m3 (total)		5 mg/m3 (resp)	
	ACGIH			10 mg/m3	** (e)
MOLYBDENUM SULFIDE (MoS ₂)	OSHA			N/E	
	ACGIH	3 mg/m3 (resp) as Mo		10 mg/m3 (ihl) as Mo	
ANTIMONY DIALKYL DITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)	OSHA			0.5 mg/m3 as Sb	
	ACGIH			0.5 mg/m3 as Sb	

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: Neoprene, nitrile, polyethylene or PVC.

EYE PROTECTION

Use eye protection.

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	Grey.		
ODOR	Mild (or faint).		
SOLUBILITY DESCRIPTION	Insoluble in water.		
DENSITY	0.90	Temperature (°C)	15.6 (60°F)
VAPOR DENSITY (air=1)	> 5		
VAPOR PRESSURE	< 0.1 mmHg	Temperature (°C)	20 (68°F)
EVAPORATION RATE	< 1	Reference	BuAc=1

pH-VALUE, CONC. SOLUTION N/A

10. STABILITY AND REACTIVITY

STABILITY Normally stable.

CONDITIONS TO AVOID Avoid contact with acids and oxidizing substances.

HAZARDOUS POLYMERIZATION Will not polymerize.

HAZARDOUS DECOMPOSITION PRODUCTS Oxides of: Carbon. Phosphorus. Sulfur.

11. TOXICOLOGICAL INFORMATION

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

COMPONENT **LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED**

TOXICOLOGICAL DATA Carcinogenicity. IP 346 <3%

TOXIC DOSE - LD 50 > 5000 mg/kg (oral rat)

TOXIC DOSE - LD 50 SKIN > 2000 mg/kg (skn rbt)

TOXIC CONC. - LC 50 No Information Available (NIA).

COMPONENT **OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT**

TOXIC DOSE - LD 50 No Information Available (NIA).

TOXIC CONC. - LC 50 No Information Available (NIA).

COMPONENT **PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS**

TOXIC DOSE - LD 50 4739 mg/kg (oral rat)

TOXIC DOSE - LD 50 SKIN > 2000 mg/kg (skn rbt)

12. ECOLOGICAL INFORMATION

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

COMPONENT **LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED**

COMPONENT **PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS**

ECOTOXICOLOGICAL DATA WGK 2

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

DOT HAZARD CLASS	Not regulated.
REPORTABLE QUANTITY (RQ)	No
SEA TRANSPORT NOTES	Not regulated per IMDG.
AIR TRANSPORT NOTES	Not regulated per IATA.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

COMPONENT	SARA 302	CERCLA	SARA 313
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	No	No	No
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	No	No	No
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	No	No	No
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	No	***	N982 - Zn
MOLYBDENUM SULFIDE (MoS ₂)	No	No	No
ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)	No	***	N010 - Sb

REGULATORY STATUS *** 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.

CLEAN AIR ACT

SARA HAZARD CATEGORIES Acute Chronic

US STATE REGULATIONS

COMPONENT	CA	MA	FL	MN	NJ	PA	RI
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED					Yes	Yes	
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS				Yes	Yes	EH	
MOLYBDENUM SULFIDE (MoS ₂)					Yes		
ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)				Yes		EH	

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

LABEL(S) FOR SUPPLY


CONTROLLED PRODUCT CLASSIFICATION

D2B - Irritating and/or Chronically Toxic Materials

Risk phrases

R-20/22 Harmful by inhalation and if swallowed.
 R-36/37/38 Irritating to eyes, respiratory system and skin.
 R-51/53 Toxic to aquatic organisms, may cause long-term adverse effect in the aquatic environment.

GLOBAL INVENTORIES

COMPONENT	CAN	US	EU	AUS	JAP	KOR	PHLP	CHN
LUBRICATING OILS, PETROLEUM, BASE OILS, HIGHLY REFINED	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	DSL	Yes	EINECS	Yes	2-1416	Yes	Yes	Yes
CARBONIC ACID CALCIUM SALT (COMMON NAME: CALCIUM CARBONATE)	DSL	Yes	EINECS	Yes	1-122	Yes	Yes	Yes
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
MOLYBDENUM SULFIDE (MoS ₂)	DSL	Yes	EINECS	Yes	PRTR1	Yes	Yes	Yes
ANTIMONY DIALKYL DITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)	NPRI	Yes	EINECS	Yes	Yes	Yes	Yes	Yes

CANADA CEPA: All components of this product comply with new substance notification requirements under the Canadian Environmental Protection Act (CEPA).

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.

CANADA (DSL)

All components in this product are listed on the Canada Domestic Substances List (DSL) or are exempt from DSL requirements.

EUROPE (EINECS/ELINCS/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.

PHILIPPINES (PICCS)

All components in this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) or are exempt from PICCS requirements.

AUSTRALIA (AICS)

All components in this product are listed on the Australian Inventory of Chemical Substances (AICS) or are exempt from AICS 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

NFPA-HMIS HAZARD RATING
HEALTH

Irritation, minor residual injury (1) - HMIS/NFPA

FLAMMABILITY Burns only if pre-heated (1) - HMIS/NFPA

REACTIVITY Normally Stable (0) - HMIS/NFPA

NPCA HMIS HAZARD INDEX Slight: Slightly Toxic - May cause slight irritation (1).

PERSONAL PROTECTION INDEX B - Safety Eyewear and Gloves

NPCA HMIS FLAMMABILITY INDEX Burns only if pre-heated (1).

Tariff Code (Schedule B) 2710.19.3750 Lubricating greases, with or without additives.

PREPARED BY Maria Maka

DATE 2008-10-01

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

*** Information revised since previous MSDS version**

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