

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: SHINDAIWA RED ARMOR LUBRICANT
Product Description: Lithium 12 Hydroxyl Soap Thickener, Synthetic Base Stocks and Additives
Product Code: 0536-2
Intended Use: Heavy Duty Industrial and Automotive Grease

COMPANY IDENTIFICATION

Manufacturer: Hydrotex Partners Ltd.
4912 S. 48th West Avenue
Tulsa, OK 74107 USA

Transportation Emergency Phone	800-424-9300 CHEMTREC
Hydrotex Transportation No.	918-583-6224
SDS Requests	972-389-8500
Product Technical Information	800-527-9439
SDS Internet Address	http://www.hydrotexlube.com

SECTION 2 HAZARDS IDENTIFICATION

GHS Classification:

Skin irritation – Category 2
Eye irritation – Category 2B

GHS label elements

Symbol(s)



Signal Word: WARNING

Hazard Statements

H316 Causes mild skin irritation
H320 Causes mild eye irritation

Precautionary Statements

P280 Wear protective gloves/eye protection/face protection

Response

P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337/P313 If eye irritation persists: Get medical attention
P302/P352 IF ON SKIN: Wash with plenty of soap and water

Disposal

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

SECTION 3	COMPOSITION/INFORMATION ON INGREDIENTS
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Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration
DISTILLATES, HYDROTREATED HEAVY PARAFFINS	64742-54-7	50 to 75%
1-DECENE, HOMOPOLYMER, HYDROGENATED	68037-01-4	10 to 20%
OLEFIN COPOLYMERS	MIXTURE	10 to 20%
LITHIUM 12 HYDROXY SOAP THICKENER	MIXTURE	5 to 15%
ZINC DIAMYLDITHIOCARBAMATE	15337-18-5	<2.50%
ANTIMONY DIALKYLDITHIOCARBAMATE	15890-25-2	<2.50%
PHOSPHORODITHIOIC ACID, O,O-DIC1-C14-ALKYL ESTERS, ZINC SALTS	68649-42-3	<2.50%
DINONYLDIPHENYLAMINE METHYLENE DIBUTYL-DITHIOCARABAMATE	24925-89-5	<0.50%
LIGHT AROMATIC NAPHTHA	64742-95-6	<0.30%
BUTYLATEDPHENOL	128-39-2	<0.30%
DIPHENYLAMINE	122-39-4	<0.30%
2,5-BIS(N-OCTYLDITHIO)-1-3,4-THIADIAZOLE	13539-12-4	<0.30%
DIOCTYL DISULFIDE	822-27-5	<0.25%

SECTION 4	FIRST AID MEASURES
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INHALATION

Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

SKIN CONTACT

Wash contact areas with soap and water.

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.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

SECTION 5	FIRE FIGHTING MEASURES
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EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

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Hazardous Combustion Products: Aldehydes, Smoke, Fume, Sulfur oxides, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method] : >232°C (450°F) [EST. FOR OIL, ASTM D-92 (COC)]

Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D

Autoignition Temperature: N/D

SECTION 6

ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. U.S. regulations require reporting releases of this material to the environment which exceed the reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

SPILL MANAGEMENT

Land Spill: Scrape up spilled material with shovels into a suitable container for recycle or disposal.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Skim from surface.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7

HANDLING AND STORAGE

HANDLING

Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is not a static accumulator.

STORAGE

Do not store in open or unlabeled containers.

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards for materials that can be formed when handling this product: When dust/mists/aerosols can occur, the following are recommended”

5 mg/m³ – ACGIH TLV,
10 mg/m³ – ACGIH STEL,
5 mg/m³ – OSHA PRL

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No protection is ordinarily required under normal conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly effect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific 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. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections: 6, 7, 12, 13

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State: Solid

Form: Semi-fluid

Color: Pink

Odor: Characteristic

Odor Threshold: None

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IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15°C): 0.91

Flash Point [Method]: >232°C (450°F) [EST. FOR OIL, ASTM D-92 (COC)]

Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D

Autoignition Temperature: N/D

Boiling Point / Range: > 316°C (600°F)

Vapor Density (Air = 1): < 1 mm

Vapor Pressure: < 1mm

Evaporation Rate (n-butyl acetate = 1): N/D

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): NE5

Solubility in Water: Negligible

Viscosity: 340 cSt (340 mm²/sec) at 40°C

Oxidizing Properties: See Sections 3, 15, 16.

OTHER INFORMATION

Freezing Point: N/D

Melting Point: N/D

DMSO Extract (mineral oil only), IP-346: < 3 %wt

NOTE: Most physical properties above are for the oil component in the material.

SECTION 10

STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11

TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

<u>Route of Exposure</u>	<u>Conclusion / Remarks</u>
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m ³	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data.	Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
Ingestion	
Toxicity (Rat): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Route of Exposure	
Skin	
Toxicity (Rabbit): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.

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Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.

CHRONIC/OTHER EFFECTS

Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC

2 = NTP SUS

3 = IARC 1

4 = IARC 2A

5 = IARC 2B

6 = OSHA CARC

SECTION 12

ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material – Not expected to be harmful to aquatic organisms

MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Base oil component -- Expected to be inherently biodegradable

BIOACCUMULATION POTENTIAL

Base oil component -- Has the potential to bio-accumulate, however metabolism or physical properties may reduce the bio-concentration or limit bioavailability.

SECTION 13

DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Suitable routes of disposal are supervised incineration, preferentially with energy recovery, or appropriate recycling methods in accordance with applicable regulations and material characteristics at the time of disposal.

REGULATORY DISPOSAL INFORMATION

RCRA Information: 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 as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosiveness or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

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Empty Container Warning PRECAUTIONARY LABEL TEXT: Empty containers may retain residue 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 reconitioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 14

TRANSPORT INFORMATION

LAND (DOT): Not Regulated for Land Transport

LAND (TDG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport

SECTION 15

REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

WHMIS: Not a controlled product

NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
MOLYBDENUM, BIS(C11-14 BRANCHED AND LINEAR ALKYL) CARBAMODITHIOATE OXO THIOXO COMPLEXES	906665-74-5	<3.00%
PHOSPHORODITHIOIC ACID, O,O-DI-C1-C14-ALKYL ESTERS, ZINC SALTS	68649-42-3	<2.0%
DIPHENYLAMINE	122-39-4	<0.30%
ZINC DIAMYL DITHIOCARBAMATE	15337-18-5	<2.0%
ANTIMONY DIALKYL DITHIOCARBAMATE	15890-25-2	<2.0%

The Following Ingredients are Cited on the Lists Below:*

Chemical Name	CAS Number	List Citations
MOLYBDENUM, BIS(C11-14 BRANCHED AND LINEAR ALKYL) CARBAMODITHIOATE OXO THIOXO COMPLEXES	906665-74-5	13, 15, 17, 18
PHOSPHORODITHIOIC ACID, O,O-DI-C1-	68649-42-3	13, 15, 17, 18

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C14-ALKYL ESTERS, ZINC SALTS		
DIPHENYLAMINE	122-39-4	12, 13, 15, 17, 18
ZINC DIAMYL DITHIOCARBAMATE	15337-18-5	17, 18
ANTIMONY DIALKYL DITHIOCARBAMATE	15890-25-2	17, 18

--REGULATORY LISTS SEARCHED--

- | | | | |
|---------------|------------------|-------------------|-------------|
| 1 = ACGIH ALL | 6 = TSCA 5a2 | 11 = CA P65 REPRO | 16 = MN RTK |
| 2 = ACGIH A1 | 7 = TSCA 5e | 12 = CA RTK | 17 = NJ RTK |
| 3 = ACGIH A2 | 8 = TSCA 6 | 13 = IL RTK | 18 = PA RTK |
| 4 = OSHA Z | 9 = TSCA 12b | 14 = LA RTK | 19 = RI RTK |
| 5 = TSCA 4 | 10 = CA P65 CARC | 15 = MI 293 | |

Code key: CARC=Carcinogen; REPRO=Reproductive

Cal. Prop. 65



WARNING This product contains the following chemical(s) known to the state of California to cause cancer and/or birth defects based on maximum impurity levels of components: <0.1 ppm cadmium; <0.5 ppm lead; <0.5 ppm arsenic; <0.7 ppm Sulfur dioxide, CAS no. 7446-09-5; <1 ppm Benzene, CAS no. 71-43-2; <10 ppm Trimethyl phosphate, CAS no. 512-56-1; <3 ppm Methanol, CAS no. 67-56-1
For more information go to: www.P65Warnings.ca.gov/petroleum.

TSCA: This material is in compliance with the Toxic Substances Control Act (15USC2601-2629)

SECTION 16	OTHER INFORMATION
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N/D = Not determined, N/A = Not applicable

NFPA Hazard ID:	Health: 0	Flammability: 1	Reactivity: 0
HMIS Hazard ID:	Health: 0	Flammability: 1	Reactivity: 0

This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS: None

No revision information is available.

The information and recommendations contained herein are, to the best of Hydrotex Partners Ltd.'s knowledge and belief, accurate and reliable as of the date issued. You can contact Hydrotex Partners Ltd. to insure that this document is the most current available. The information and recommendations are offered for the user's consideration and examination. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users.