

Product Name: MOBIL SHC GREASE 460 WT
Revision Date: 23 Jan 2023
Page 1 of 10

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: MOBIL SHC GREASE 460 WT
Product Description: Synthetic Base Stocks and Additives
Product Code: 2015A0209710, 643932-80
Intended Use: Grease

COMPANY IDENTIFICATION

Manufacturer/Supplier: ExxonMobil Asia Pacific Pte. Ltd (Company No.: 196800312N)
1 Harbour Front Place
#06-00 Harbour Front Tower One 098633 Singapore

**24 Hour Health Emergency
Supplier General Contact** +1 703-253-4229/+1 703-527-3887
(65) 6885 8000/86-21-24076000

Supplier: EQUATOR COMPANY LIMITED
146 - 148 Khanh Hoi Street
Ward 6, District 4, Ho Chi Minh City
Vietnam
Supplier General Contact +84 28 3940 6411

Supplier: Nam Giang Commercial Service Co., Ltd
120 Hoang Hoa Tham Street
Ward 7, Binh Thanh District
Ho Chi Minh City Vietnam
Supplier General Contact +84 28 7302 4500
FAX +84 28 3847 6879

Supplier: PAN International Petroleum Joint Stock Company
53 Hoang Quoc Viet street
Nghia Do Ward, Cau Giay District
Hanoi Vietnam
Supplier General Contact +84 24 32123939

SECTION 2 HAZARDS IDENTIFICATION

This material is hazardous according to regulatory guidelines (see (M)SDS Section 15).

CLASSIFICATION:

Product Name: MOBIL SHC GREASE 460 WT

Revision Date: 23 Jan 2023

Page 2 of 10

Reproductive toxicant (developmental): Category 1B. Reproductive toxicant (fertility): Category 1B.

LABEL:

Symbol:



Signal Word: Danger

Hazard Statements:

Health: H360: May damage the unborn child. H360: May damage fertility.

Precautionary Statements:

Prevention: P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P280: Wear protective gloves and clothing.

Response: P308 + P313: IF exposed or concerned: Get medical advice/ attention.

Storage: P405: Store locked up.

Disposal: P501: Dispose of contents and container in accordance with local regulations.

Contains: 5-NONYL-SALICYLALDOXIME

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS

No significant hazards.

HEALTH HAZARDS

High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation.

ENVIRONMENTAL HAZARDS

No significant hazards.

NOTE: 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.

SECTION 3

COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
5-NONYL-SALICYLALDOXIME	174333-80-3	0.1 - < 0.3%	H315, H318, H317,

Product Name: MOBIL SHC GREASE 460 WT

Revision Date: 23 Jan 2023

Page 3 of 10

			H360(1B)(D), H360(1B)(F), H400(M factor 10), H410(M factor 10)
ALKENYL SUCCINIC ANHYDRIDE	19780-11-1	0.1 - < 1%	H315, H319(2A), H317
HEXANEDIOIC ACID, DILITHIUM SALT	18621-94-8	1 - < 5%	H302, H402
LITHIUM HYDROXIDE MONOHYDRATE	1310-66-3	0.1 - < 1%	H302, H314(1B)

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

SECTION 4 FIRST AID MEASURES

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. Remove contaminated clothing. Launder contaminated clothing before reuse. 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.

NOTE TO PHYSICIAN

None

SECTION 5 FIRE FIGHTING MEASURES

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.

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

FLAMMABILITY PROPERTIES

Flash Point [Method]: >204°C (400°F) [EST. FOR OIL, ASTM D-92 (COC)]

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

Autoignition Temperature: N/D

Product Name: MOBIL SHC GREASE 460 WT
Revision Date: 23 Jan 2023
Page 4 of 10

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.

PROTECTIVE MEASURES

Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

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. Warn other shipping. 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

Avoid all personal contact. 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 unlabelled containers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit / Standard			NOTE	Source	Year
LITHIUM HYDROXIDE MONOHYDRATE		STEL	1 mg/m3			Vietnam OELs	2019
LITHIUM HYDROXIDE MONOHYDRATE		TWA	0.5 mg/m3			Vietnam OELs	2019

Product Name: MOBIL SHC GREASE 460 WT
Revision Date: 23 Jan 2023
Page 5 of 10

LITHIUM HYDROXIDE MONOHYDRATE		Ceiling	1 mg/m3			OARS WEEL	2018
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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. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended. Nitrile, Viton

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:

Chemical/oil resistant clothing is recommended.

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

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

Product Name: MOBIL SHC GREASE 460 WT
Revision Date: 23 Jan 2023
Page 6 of 10

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Solid
Form: Semi-fluid
Color: Red
Odor: Characteristic
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 °C): 0.9
Flammability (Solid, Gas): N/A
Flash Point [Method]: >204°C (400°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) [Estimated]
Decomposition Temperature: N/D
Vapor Density (Air = 1): N/D
Vapor Pressure: < 0.013 kPa (0.1 mm Hg) at 20 °C [Estimated]
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/A
Solubility in Water: Negligible
Viscosity: 460 cSt (460 mm²/sec) at 40 °C | >16 cSt (16 mm²/sec) at 100°C
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/D

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

SECTION 10	STABILITY AND REACTIVITY
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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.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11	TOXICOLOGICAL INFORMATION
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INFORMATION ON TOXICOLOGICAL EFFECTS

Product Name: MOBIL SHC GREASE 460 WT
Revision Date: 23 Jan 2023
Page 7 of 10

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
Sensitization	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available.	Not expected to be a skin sensitizer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 406 429
Aspiration: Data available.	Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: No end point data for material.	Not expected to be a germ cell mutagen. Based on assessment of the components.
Carcinogenicity: No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
Reproductive Toxicity: No end point data for material.	Contains a substance that may be a reproductive toxicant. Based on assessment of the components.
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: No end point data for material.	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

TOXICITY FOR SUBSTANCES

NAME	ACUTE TOXICITY
HEXANEDIOIC ACID, DILITHIUM SALT	Oral Lethality: LD50 1098 mg/kg (Rat)

OTHER INFORMATION

For the product itself:

Component concentrations in this formulation would not be expected to cause skin sensitization, based on tests of the components, this formulation, or similar formulations.

Contains:

Synthetic base oils: Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitizing in test animals and humans.

Product Name: MOBIL SHC GREASE 460 WT
Revision Date: 23 Jan 2023
Page 8 of 10

IARC Classification:

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

--REGULATORY LISTS SEARCHED--

1 = IARC 1

2 = IARC 2A

3 = IARC 2B

SECTION 12**ECOLOGICAL INFORMATION**

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

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.

ECOLOGICAL DATA**Ecotoxicity**

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	96 hour(s)	Brachydanio rerio	NOELR 103 mg/l: data for the material
Aquatic - Acute Toxicity	48 hour(s)	Ceriodaphnia dubia	EL50 105 mg/l: data for the material
Aquatic - Acute Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	ErL50 105 mg/l: data for the material
Aquatic - Chronic Toxicity	28 day(s)	Brachydanio rerio	NOELR 1.2 mg/l: data for the material
Aquatic - Chronic Toxicity	6 day(s)	Ceriodaphnia dubia	NOELR 1.1 mg/l: data for the material
Aquatic - Chronic Toxicity	72 hour(s)	Pseudokirchneriella subcapitata	NOELR 105 mg/l: data for the material

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

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION.

Product Name: MOBIL SHC GREASE 460 WT
Revision Date: 23 Jan 2023
Page 9 of 10

THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14	TRANSPORT INFORMATION
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LAND : Not Regulated for Land Transport

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

Marine Pollutant: No

AIR (IATA): Not Regulated for Air Transport

SECTION 15	REGULATORY INFORMATION
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This material is considered hazardous according to the Law on Chemicals.

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Listed or exempt from listing/notification on the following chemical inventories :

IECSC, ISHL, TCSI, TSCA

Special Cases:

Inventory	Status
AIIC	Restrictions Apply
KECI	Restrictions Apply
NDSL	Restrictions Apply

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

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H302: Harmful if swallowed; Acute Tox Oral, Cat 4

H314(1B): Causes severe skin burns and eye damage; Skin Corr/Irritation, Cat 1B

H315: Causes skin irritation; Skin Corr/Irritation, Cat 2

H317: May cause allergic skin reaction; Skin Sensitization, Cat 1

H318: Causes serious eye damage; Serious Eye Damage/Irr, Cat 1

H319(2A): Causes serious eye irritation; Serious Eye Damage/Irr, Cat 2A

H360(1B)(D): May damage the unborn child; Repro Tox, Cat 1B (Develop)

H360(1B)(F): May damage fertility; Repro Tox, Cat 1B (Fertility)

H400: Very toxic to aquatic life; Acute Env Tox, Cat 1

H402: Harmful to aquatic life; Acute Env Tox, Cat 3

H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

EQUATOR COMPANY LIMITED: Section 01: Supplier Mailing Address information was modified.

Nam Giang Commercial Service Co., Ltd): Section 01: Supplier Mailing Address information was deleted.



Product Name: MOBIL SHC GREASE 460 WT

Revision Date: 23 Jan 2023

Page 10 of 10

Nam Giang Commercial Service Co., Ltd: Section 01: Supplier Mailing Address information was added.

PAN International Petroleum Joint Stock Company: Section 01: Supplier Mailing Address information was modified.

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