

SAFETY DATA SHEET



MOBIL SHC GEAR 460

Section 1. Identification

Product name : MOBIL SHC GEAR 460
Product description : synthetic base stocks and additives

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Gear oil
Uses advised against : This product is not recommended for any industrial, professional or consumer use other than the Identified Uses above.

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Section 2. Hazard identification

Classification of the substance or mixture : Aquatic Chronic 3, H412

GHS label elements

Hazard statements : H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P273 - Avoid release to the environment.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : EUH208 - Contains 1h-benzotriazole-1-methanamine, n,n-bis(2-ethylhexyl)-ar-methyl-. May produce an allergic reaction.

Other hazards which do not result in classification : None known.

Nota : 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

Substance/mixture : Mixture

Section 3. Composition/information on ingredients

Ingredient name	% by weight	Identifiers
benzenamine, n-phenyl-, reaction products with 2,4,4-trimethylpentene	<1	REACH #: 01-2119491299-23 EC: 270-128-1 CAS: 68411-46-1
o,o,o-triphenyl phosphorothioate	<0.25	REACH #: 01-2119979545-21 EC: 209-909-9 CAS: 597-82-0
1h-benzotriazole-1-methanamine, n,n-bis(2-ethylhexyl)-ar-methyl-	≤0.3	REACH #: 01-2119982395-25 EC: 939-700-4 CAS: -

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. 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** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Local necrosis as evidenced by delayed onset of pain and tissue damage a few hours after injection.
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

Section 4. First-aid measures

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Aldehydes, Incomplete combustion products, Oxides of carbon, Smoke, Fume, sulfur oxides

Special protective actions for fire-fighters : Use standard firefighting procedures and consider the hazards of other involved materials. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Assure an extended cooling down period to prevent re-ignition. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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.

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Confine the spill immediately with booms. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants. Warn other shipping. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Static Accumulator** : This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
1-dodecene, polymer with 1-octene, hydrogenated ditridecyl adipate	ExxonMobil (COMPANY) TWA 8 hours: 5 mg/m ³ . Form: Aerosols (thoracic fraction). ExxonMobil (COMPANY) TWA 8 hours: 5 mg/m ³ .
1-dodecene, polymer with 1-decene, hydrogenated 1-decene, homopolymer hydrogenated	ExxonMobil (COMPANY) TWA 8 hours: 5 mg/m ³ . Form: Aerosols (thoracic fraction). ExxonMobil (COMPANY) TWA 8 hours: 5 mg/m ³ . Form: Aerosols (thoracic fraction).

Section 8. Exposure controls/personal protection

1-decene, polymer with 1-octene and
1-dodecene, hydrogenated

ExxonMobil (COMPANY)

TWA 8 hours: 5 mg/m³. Form: Aerosols (thoracic fraction).

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

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.

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state

: Liquid.

Colour

: Colorless to Yellow

Odour

: Characteristic

Odour threshold

: Not available.

pH

: Not applicable.

Melting point/freezing point

: Not available.

Section 9. Physical and chemical properties and safety characteristics

Boiling point or initial boiling point and boiling range	: >315.56°C (>600°F) [Estimated]
Flash point	: Open cup: >210°C (>410°F) [ASTM D-92]
Evaporation rate	: Not available.
Flammability	: Ignitable
Lower and upper explosion limit/flammability limit	: Lower: 0.9% [Estimated] Upper: 7% [Estimated]
Vapour pressure	: <0.1 mm Hg [20 °C] [Estimated]
Relative vapour density	: >2 [Air = 1] [Estimated]
Relative density	: 0.85 [ASTM D4052]
Solubility in water	: Negligible
Partition coefficient: n-octanol/water	: >3.5 [Estimated]
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: 460 cSt [40 °C] [ASTM D 445]
<u>Particle characteristics</u>	
Median particle size	: Not applicable.
Pour point	: -27°C [ASTM D5950]

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: High energy sources of ignition. Excessive heat.
Incompatible materials	: Strong oxidisers
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
1h-benzotriazole-1-methanamine, n,n-bis (2-ethylhexyl)-ar-methyl-	Rat - Oral - LD50 3313 mg/kg

Conclusion/Summary

Inhalation	: Minimally Toxic. No end point data for material. Based on assessment of the components.
Dermal	: Minimally Toxic. No end point data for material. Based on assessment of the components.
Oral	: Minimally Toxic. No end point data for material. Based on assessment of the components.

Section 11. Toxicological information

Irritation/Corrosion

Conclusion/Summary

- Skin** : Negligible irritation to skin at ambient temperatures. No end point data for material. Based on assessment of the components.
- Eyes** : May cause mild, short-lasting discomfort to eyes. No end point data for material. Based on assessment of the components.
- Respiratory** : Negligible hazard at ambient/normal handling temperatures. No end point data for material.

Respiratory or skin sensitization

Conclusion/Summary

- Skin** : Not expected to be a skin sensitizer. No end point data for material. Based on assessment of the components.
- Respiratory** : Not expected to be a respiratory sensitizer. No end point data for material.

Mutagenicity

- Conclusion/Summary** : Not expected to be a germ cell mutagen. No end point data for material. Based on assessment of the components.

Carcinogenicity

- Conclusion/Summary** : Not expected to cause cancer. No end point data for material. Based on assessment of the components.

Reproductive toxicity

- Conclusion/Summary** : Not expected to be a reproductive toxicant. No end point data for material. Based on assessment of the components.

Specific target organ toxicity (single exposure)

- Conclusion/Summary** : Not expected to cause organ damage from a single exposure. No end point data for material.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Target organs
MOBIL SHC GEAR 460	Not applicable.	-

- Conclusion/Summary** : Not expected to cause organ damage from prolonged or repeated exposure. No end point data for material. Based on assessment of the components.

Aspiration hazard

- Conclusion/Summary** : Not expected to be an aspiration hazard. Based on physico-chemical properties of the material. Data available.

Other information

- 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 sensitising in test animals and humans. Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (substituted DPA): Results from a supplier's extended one-generation dietary study with 10-week pre-mating administration of substituted DPA included decreased body weight and body weight gains in parental females during gestation and lactation, decreased number of implantation sites and decreased mean litter size. A representative formulation containing substituted DPA was tested in a rat oral gavage reproductive/developmental toxicity screening study (OECD TG 421) with a 10-week pre-mating administration period. Study results included decreased body weight and body weight gain starting in pre-mating and continuing through gestation and lactation in parental females, decreased number of implantation sites and decreasing trend in litter size. A 5 wt% classification threshold for the reproductive effects of substituted DPA was derived based on the NOAEL (50 mg/kg/day) and is consistent with the NOAEL in the supplier's study.

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.

Toxicity

Conclusion/Summary

- Acute toxicity** : Not expected to be harmful to aquatic organisms.
Chronic toxicity : Harmful to aquatic life with long lasting effects.

Persistence and degradability

Not determined.

Bioaccumulative potential

Not determined.

Mobility in soil

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

Other ecological information

- Other adverse effects** : No known significant effects or critical hazards.

Section 13. Disposal considerations

- Disposal methods** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Section 14. Transport information

	ADR	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.

- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

- Transport in bulk according to IMO instruments** : Not applicable.

Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia inventory (AIIIC)	: All components are listed or exempted.
Canada inventory (DSL-NDSL)	: All components are listed or exempted.
China inventory (IECSC)	: All components are listed or exempted.
Japan inventory (CSCL)	: All components are listed or exempted.
Japan inventory (Industrial Safety and Health Act)	: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	: All components are listed or exempted.
United States inventory (TSCA 8b)	: All components are active or exempted.

Section 16. Other information

History

Date of issue/Date of revision : 3/28/2025

Date of previous issue : No previous edition

Version : 1

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- UN = United Nations

Procedure used to derive the classification

Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Section 16. Other information

Product code : 201560409050_P000003911

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