SAFETY DATA SHEET

MOBILUBE HD 80W-90

ExxonMobil

Section 1. Identification

Product name : MOBILUBE HD 80W-90

Product description : base oil 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.

Supplier : PT. ExxonMobil Lubricants Indonesia
Wisma GKBI, 27th Floor
Jl. Jend Sudirman No. 28
Jakarta 10210 Indonesia
Or ExxonMobil Affiliates

24-Hour emergency telephone number : 1-800-424-9300/+1-703-527-3887 (CHEMTREC)

Supplier General Contact : 6221-525-1883

FAX : 62-21-571-5171

SDS Internet Address : www.sds.exxonmobil.com

Section 2. Hazards identification

Classification of the substance or mixture : AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements, including precautionary statements

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.

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

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

Substance/mixture : Mixture

Ingredient name	% by weight	Identifiers
alkyl polysulfides	≤2.3	CAS: 68937-96-2
amines, c12-14-tert-alkyl	≤0.17	CAS: 68955-53-3

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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, 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

Section 5. Fire-fighting measures

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 runoff 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 spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized 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 spilled 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 materials 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.

Large spill : Stop leak if without risk. Move containers from spill area. Approach 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 spilled 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 vapor 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.

Section 7. Handling and storage

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 unlabeled 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

Ingredient name	Exposure limits
severely hydrotreated heavy paraffinic distillate	**Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018) [oil, mineral]** TWA 8 hours: 5 mg/m³. Form: mist. STEL 15 minutes: 10 mg/m³. Form: mist. **ACGIH TLV (United States, 1/2024) [Mineral Oil, pure, highly and severely refined]** TWA 8 hours: 5 mg/m³. Form: Inhalable fraction.
solvent dewaxed heavy paraffinic distillate	**Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018) [oil, mineral]** TWA 8 hours: 5 mg/m³. Form: mist. STEL 15 minutes: 10 mg/m³. Form: mist. **ACGIH TLV (United States, 1/2024) [Mineral Oil, pure, highly and severely refined]** TWA 8 hours: 5 mg/m³. Form: Inhalable fraction.
solvent dewaxed residual oil (petroleum)	**Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018) [oil, mineral]** TWA 8 hours: 5 mg/m³. Form: mist. STEL 15 minutes: 10 mg/m³. Form: mist. **ACGIH TLV (United States, 1/2024) [Mineral Oil, pure, highly and severely refined]** TWA 8 hours: 5 mg/m³. Form: Inhalable fraction.
hydrotreated residual oil	**Minister of Labor of the Republic of Indonesia (Indonesia, 4/2018) [oil, mineral]** TWA 8 hours: 5 mg/m³. Form: mist. STEL 15 minutes: 10 mg/m³. Form: mist. **ACGIH TLV (United States, 1/2024) [Mineral Oil, pure, highly and severely refined]** TWA 8 hours: 5 mg/m³. Form: Inhalable fraction.

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

Section 8. Exposure controls/personal protection

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.

Color : Yellow to Brown

Odor : Characteristic

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : >315.56°C (>600°F)

Flash point : Open cup: 213°C (415.4°F) [ASTM D-92]

Section 9. Physical and chemical properties and safety characteristics

Evaporation rate : Not available.

Flammability : Ignitable

Lower and upper explosion limit/flammability limit : Lower: 0.9%
Upper: 7%

Vapor pressure : <0.1 mm Hg [20 °C]

Relative vapor density : >2 [Air = 1]

Relative density : 0.8897

Solubility in water : Negligible

Partition coefficient: n-octanol/water : >3.5

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : 131.6 cSt [40 °C] [ASTM D 445]
14.12 cSt [100 °C] [ASTM D 445]

Particle characteristics

Median particle size : Not applicable.

Pour point : -24°C [ASTM D97]

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

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 oxidizers

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	Test	Species	Result	Duration
amines, c12-14-tert-alkyl	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rat Rat Rat	1.19 mg/l 251 mg/kg 612 mg/kg	4 hours - -

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
MOBILUBE HD 80W-90	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 : 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.

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

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 : Harmful to aquatic life.

Chronic toxicity : Harmful to aquatic life with long lasting effects.

Section 12. Ecological information

Persistence and degradability

Biodegradability : Base oil component -- Expected to be inherently biodegradable

Bioaccumulative potential

Conclusion/Summary : Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

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 minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
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. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

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

Inventory list

Australia inventory (AIIC)	:	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 October 2024
Date of previous issue	:	26 August 2024
Version	:	3

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

Classification	Justification
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Product code : 201520503520_1289854

Notice to reader

The information and recommendations contained herein are, to the best of ExxonMobil's knowledge and belief, accurate and reliable as of the date issued. You can contact ExxonMobil to insure that this document is the most current available from ExxonMobil. 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. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted. The term, "ExxonMobil" is used for convenience, and may include any one or more of ExxonMobil Chemical Company, Exxon Mobil Corporation, or any affiliates in which they directly or indirectly hold any interest.