

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION AND COMPANY

Product Name Gear oil SAE 90 API GL 5

Product Type Automotive gear box oil.

Company PT. PACIFIC LUBRITAMA INDONESIA
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2. COMPOSITION

Mineral Oil Content 93 -97 %
Additives Content 3- 7%.

3. HAZARDS IDENTIFICATION

Human Health Product is not hazardous.

 Hazards: Dibutyl Hydrogen Phosphite < 1 %
 Oleylamine < 1 %
 Sulfurized Isobutylene < 3.2 %

Eye Contact Slightly irritant.

Skin Contact Prolonged or repeated contact may irritate skin.

Inhalation Repeated and prolonged over-exposure to oil mists may cause irritation or discomfort.

Ingestion Minimal toxicity.

Safety Hazards Not classified as flammable but will burn.

Environmental Not readily biodegradable.
Hazards

4. FIRST AID

Eye Contact	Flush eyes with large amount of water until irritation subsides. If irritation persists, get medical attention.
Skin Contact	Flush with large amount of water; use soap if available. Remove contaminated clothing. If irritation persists, get medical attention.
Inhalation	Remove to fresh air. If rapid recovery does not occur, get medical attention.
Ingestion	Do not induce vomiting. If rapid recovery does not occur, get medical attention.

5. FIRE SAFETY

Flash Point	>250°C.
Flammable Limits	LEL 1.0. UEL 6.0.
Autoignition Temp	>310°C.
Specific Hazards	Not classified as flammable but will burn. Hazardous combustion products may include carbon monoxide, oxides of sulphur, and unidentified organic and inorganic compounds.
Fire Fighting	Use dry chemical, foam or carbon dioxide to extinguish fire. Water may cause splattering or frothing. Use water to cool and protect fire-exposed material. Wear protective equipment during fire fighting.

6. ACCIDENTAL RELEASE MEASURES

Clean-up Procedure Stop the source of leak or release and contain spill if possible. Cover spill with generous amount of inert absorbent material such as sand or earth. Sweep up and remove to suitable, clearly marked containers for disposal in accordance with local regulations. Scrub contaminated area with detergent and water. Pick up liquid with additional absorbent material and dispose as above. Wear proper protective equipment during clean-up.

7. HANDLING AND STORAGE

Handling Handling temperatures should not exceed 70°C. Wear proper safety protective equipment. Wash hands thoroughly after handling. Water contamination and spillage should be avoided.

Storage Storage temperatures should be maintained between 0 to 50°C. Odorous and toxic fumes may be evolved from decomposition of product if stored above the safe temperature.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Limits Threshold Limit Values for oil mist is recommended to be controlled at 5 mg/m³ or lower for exposure of 8 hours daily.

Ventilation Use exhaust ventilation to keep below exposure limits.

Eye Protection Wear safety glasses or face shields if splashing is likely to occur.

Skin Protection Avoid repeated and prolonged contact with product. Use oil resistant gloves.

Respiratory Protection Not normally required unless in confined space.

Body Protection Use proper protective equipment to avoid contact. Wear PVC apron if splashes are likely to occur.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid.
Colour	Brownish.
Odour	Characteristic mineral oil.
Vapour Pressure	<0.5 Pa at 20°C.
Density	0.9006 g/cm ³ at 15°C
Kinematic Viscosity @ 40°C	202.23 cSt.
Kinematic Viscosity @ 100°C	17.60 cSt.
Pour Point	-9 °C.
Flash Point	>250 °C.
pH of undiluted product	Not available.
Auto-ignition temperature	>310°C.
Solubility in water	Negligible.

10. STABILITY AND REACTIVITY

Stability	Product is stable under normal use conditions.
Thermal Decomposition	Carbon monoxide, carbon dioxide, oxides of sulphur and nitrogen and organic and inorganic compound may evolve when subject to heat or combustion.
Hazardous Polymerisation	Will not occur under normal conditions.
Incompatible Materials	Strong oxidizing agents. Strong acids.

11. TOXICOLOGICAL INFORMATION

Basis	No toxicological data is available for this product. Information is provided based on the additives, other components and base stock used.
Acute Exposure - Oral	LD 50 expected to be above 2000 mg/kg.
Acute Exposure - Skin	LD 50 expected to be above 2000 mg/kg.
Inhalation	Repeated or prolonged exposure to oil mists may cause irritation.
Eye Irritation	Slightly irritant.
Skin Irritation	Not a skin irritant unless repeated or prolonged contact.
Respiratory Irritation	Slight irritant.
Carcinogenicity	No data to suggest that product is carcinogenic.
Mutagenicity	No data to suggest that product is mutagenic.
Other Information	Brief contact with used oil is not expected to have serious effect in humans if the oil is removed thoroughly by washing with soap and water.

Used engine oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they present risks to health and the environment on disposal. All used oils should be handled with caution and skin contact should be avoided.

12. ECOLOGICAL INFORMATION

Basis	No ecological data is available for this product. Information is provided based on the additives, other components and base stock used.
Mobility	Liquid under most environmental conditions. Floats on water. It is absorbed by soil and will not be mobile.
Persistence/ Degradability	Not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
Bioaccumulation	Has the potential to bioaccumulate.
Ecotoxicity	Poor soluble mixture. Practically non-toxic to aquatic organisms. May cause physical fouling of aquatic organisms.

13. DISPOSAL CONSIDERATION

Product Disposal	Used or waste oil should be recycled or disposed off in conformity to local disposal regulations. Contact local authorities for approved disposal contractor.
Container Disposal	Empty drums should be completely drained and sent to a drum reconditioner or properly disposed of. Non-reusable small containers should be recycled or disposed of. Ensure conformity to local disposal regulations.

14. TRANSPORT INFORMATION

General Information	Not dangerous for conveyance under UN, IMO, ADR/RID and IATA/ICAO codes.
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15. REGULATORY INFORMATION

Not Applicable.

16. OTHER INFORMATION

The above information is based on data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose. Therefore, no warranty either express or implied of merchantability or fitness for particular purpose is made with respect to the product or the information contained herein.