MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION AND COMPANY

Product Name Soluble Cutting Oil /SOLVENT

Product Type Soluble Cutting Oil

Company PT. PACIFIC LUBRITAMA INDONESIA

Jl. Raya Bojonegara KM 6, Desa Bojonegara Serang

Banten - Indonesia. 42454

Tel: (62-254) 5750555 Fax: (62-254) 5750333

2. COMPOSITION

Sodium Sulphonate < 5.0%

3. HAZARDS IDENTIFICATION

This product consists of highly refined base oils with additives. It is of low oral and dermal toxicity and under normal conditions of use should present no significant health hazards. However, in common with most mineral oils, prolonged and repeated skin contact may cause dermatitis. Handling precautions should be strictly observed.

4. FIRST AID

INHALATION:

At ambient/normal handling temperature, inhalation of vapors is normally not a problem. If overexposed to oil mist, remove from further exposure. Administer artificial respiration if breathing is irregular or has stopped. Get prompt medical attention.

SKIN CONTACT:

Wash thoroughly with plenty of water, using soap if available. Remove contaminated clothing. If irritation persists, get medical attention.

EYE CONTACT:

Rinse immediately with plenty of water until irritation subsides. If irritation persists, get medical advice.

INGESTION:

If swallowed, DO NOT induce vomiting; keep at rest and call a physician.

FIRE SAFETY

EXTINGUISHING MEDIA:

Foam, dry chemical powder, carbon dioxide.

FIRE AND EXPLOSION HAZARDS:

Combustible material, low hazard. The product can form flammable mixtures or can burn only on heating above the flash point. However, minor contamination by hydrocarbons of high volatility may increase the hazard.

SPECIAL FIRE-FIGHTING PRECEDURES:

Water for or spray, to cool fire-exposed surfaces (e.g. containers) and to protect personnel, should only be used by personnel trained in fire fighting.

Cut off "fuel"; depending on circumstances, either allow the fire to burn out under controlled conditions or use foam or dry chemical powder to extinguish the fire.

Respiratory and eye protection required for fire fighting personnel exposed to fumes or smoke.

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, and carbon monoxide may be formed in the event of incomplete combustion.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: See Section 8.

LAND SPILL:

Shut off source taking normal safety precautions. Prevent liquid from entering sewers, water courses or low lying areas; advise the relevant authorities if it has, or if it contaminates soil/vegetation. Take measures to minimize the effects on ground water.

Recover by skimming or pumping using explosion-proof equipment, or contain spilled liquid wit brooms, sand, or other suitable absorbent and remove mechanically into containers.

If necessary, dispose of adsorbed residues as directed in Section 13.

WATER SPILL:

Confine the spill immediately with booms. Warn other shipping. Notify port and other relevant authorities.

Remove from the surface by skimming or with suitable absorbents. Disperse the residue in unconfined waters, if permitted by local authorities and environmental agencies.

7. HANDLING AND STORAGE

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LOAD/UNLOAD TEMPERATURE °C: Ambient to max 60 °C STORAGE TEMPERATURE °C: Ambient to max 60 °C

SPECIAL PRECAUTIONS:

Keep containers closed when not in use.

Prevent small spills and leakages to avoid slip hazard.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT:

5 mg/m³ for mists (TWA, 8h – workday) recommended based upon the ACGIH TLV (Analysis according to US NIOSH Method 5026, NIOSH Manual of Analytical Methods, 3rd Ed.).

PERSONAL PROTECTION

In open systems where contact is likely, wear safety goggles, chemical-resistant overalls, and chemically impervious gloves.

Where only incidental contact is likely, wear safety glasses with side shields. No other special precautions are necessary provided skin/eye contact is avoided.

When concentrations in air may exceed the occupational exposure limit, and where engineering, work practices, or other means of exposure reduction are not adequate, approved respirators may be required.

PHYSICAL AND CHEMICAL PROPERTIES 9.

APPEARANCE/ODOUR: Clear Liquid, scented petroleum odour.

Physical State: Liquid.

Characteristic mineral oil. Odour:

Density @ 30°C $0.87 \,\mathrm{g/cm^3}$. Kinematic Viscosity @ 40: 20 cSt.

Flash Point: 180 min Solubility in water: Soluble pH of diluted product: 9.2 Break-point IP 287: 5.0%

Flammability limits in air: LEL: Not determine; UEL: Not determine

Auto-ignition temperature: No data available

10. STABILITY AND REACTIVITY

Stability: Product is stable under normal use conditions.

Thermal: Carbon monoxide, carbon dioxide, oxides of sulphur and Nitrogen and organic and inorganic compound may evolve Decomposition:

when subject to heat or combustion.

Hazardous

Incompatible

Polymerisation:

Will not occur under normal conditions.

Strong oxidizing agents. Strong acids.

Materials:

11. TOXICOLOGICAL INFORMATION

INHALATION:

Negligible hazard at ambient/normal handling temperatures.

Elevated temperatures or mechanical action may form vapours, mists, or fumes which may be irritating to the eyes, nose, throat, and lungs.

Avoid breathing vapours, mists, or fumes.

SKIN CONTACT:

Low order of acute toxicity.

Prolonged or repeated contact may lead to mild skin irritation.

EYE CONTACT:

Slightly irritating, but does not injure eye tissue.

INGESTION:

Low order of acute/systemic toxicity.

CHRONIC:

Contains lubricating oil base stocks. Base oils of similar composition and refining history have exhibited no carcinogenic activity in laboratory animals.

TOXICITY DATA - ACUTE

No test data are available for the complete formulated product. The potential health hazards described were therefore derived from what is generally known of the toxicity of the base oils and the additives, taking into account the concentrations at which they are present. The general effects of mineral oils of this type are well known and are described in numerous publications including CONCAWE Report 5/87 "Health Aspects of Lubricants".

TOXICITY DATA - CHRONIC

Although there is no specific test data on the base oil components, the base oil would not be expected to exhibit carcinogenic potential based upon what is known of the toxicity of base oils in general

12.	ECOLOGICAL INFORMATION	
	In the absence of specific environmental data for this product, this assessment is based on information for general hydrocarbon components found in lubricant mineral oils. Lubricant mineral oils, immediately following a release into the environment, will remain largely on the soil surface, and in water, will remain largely on the water surface. Based on chemical/physical information from the literature for this product category, no harmful effects to terrestrial or aquatic habitats would be expected. This product is expected to be resistant to biodegradation and to persist in the environment. This product may contain additives for e\which no environmental data is available. Hence, the above assessment concerns the base oil(s) only.	
13.	DISPOSAL CONSIDERATION	
	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.	
	Contact local authorities for approved disposal contractor.	
14.	TRANSPORT INFORMATION	
	General Information:	Not dangerous for conveyance under UN, IMO, ADR/RID and IATA/ICAO codes.
 15.	REGULATORY INFORM	 IATION

Not Applicable.

16. OTHER INFORMATION

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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.