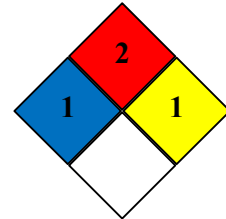


**MATERIAL SAFETY DATA SHEET
(MSDS)****SECTION 1****PRODUCT AND COMPANY IDENTIFICATION****PRODUCT**

Product Name : Minyak Solar
Other Name : Gasoil / HSD
Product Description : Severely Treated Base Oil
Intended Use : Base Oil

**COMPANY IDENTIFICATION**

Supplier : PT. Pacific Lubritama Indonesia
Jl. Raya Bojonegara Km. 06
Serang 42454 – Banten

Supplier General Contact

Telephone : (0254) 5750 555
Fax : (0254) 5750 333

**SECTION 2
MATERIAL COMPOSITION /
IDENTITY INFORMATION**

Chemical Name and Synonyms :
Petroleum Hydrocarbons

**SECTION 3
HAZARD IDENTIFICATION**

Hazard Communications Standard :
Under OSHA 29 CFR 1910.1200 (dangerous)

Exposure Effects :

Respiratory irritation, dizziness, nausea, fainting. On exposure in a long time and repeated - again will cause skin irritation or more serious skin disorder. In addition the study reported also from the dangers these products can cause skin cancer in humans under conditions of poor personal hygiene, exposure to sunlight, exposure time is long and repetitive.

Emergency Response Data :

Flammable liquids.

**SECTION 4
FIRST AID METHODS****Eye Contact :**

Flush as much as possible by using water. If there is contact a doctor.

Skin contact :

Dry skin is exposed to contact with this product. Rinse the affected part of this material use water and soap.

Inhalation:

Keep the victim from further exposure in case of respiratory irritation, dizziness, nausea and fainting call your doctor. In case of stopping breathing do mouth to mouth resuscitation.

Swallowed:

If swallowed do not stimulate vomiting. Give 1 or 2 liters of water, and contact your doctor.



<p>SECTION 5 FIRE FIGHTING METHODS</p>	<p>Fire Extinguishing Media : Carbon dioxide, foam, dry chemical and water fog.</p> <p>Special Fire Fighting Procedures : Water or foam may cause frothing. Flush the container with water to keep containers cool. Do watering using water to eliminate spills. Avoid draining the rest spills into drains, sewers or water supply.</p> <p>Personal Protective Equipment : For fires in enclosed areas, firefighters operator must use Self Contained Breathing Apparatus (SCBA).</p> <p>Other Fire and Explosion Hazards : Combustible materials. Flash point °C (F); > 52 (105) (ASTM D-93). Flammable limits; LEL = 0.6 %, UEL = 7.0.</p> <p>NFPA Hazard ID : Health: 1, Flammability: 2, Reactivity: 0</p> <p>Hazardous Decomposition Fuel : Carbon monoxide.</p>
<p>SECTION 6 SPILL AND LEAK HANDLING METHODS</p>	<p>Registration Procedure : Report a spillage in accordance with the authority that has been determined. In case of spills that may enter waterways and tributaries, report it immediately.</p> <p>Leak or Spill Procedure : Do it adsorbs to the spillage using sawdust, clay, and other fire barrier materials. Clean up and dispose of in landfills that have been prescribed by the regulations.</p> <p>Environmental Prevention : Prevent entry into sewer spills, sewer and into the ground.</p> <p>Prevention People : See Section 8</p>
<p>SECTION 7 PRECAUTIONS FOR HANDLING AND STORAGE</p>	<p>Handling : Cause serious effects if absorbed through skin contact. Avoid vapor or mist is not inhaled by the respiratory tract. Portable containers used for storage should be placed on the ground and must remain the same nozzle with the container when charging to prevent static electricity.</p> <p>Storage : Keep in a cool place. Air combustible (flammable atmosphere) can be formed in the top of the storage tank if stored at temperatures below the flash point. Keep out of materials - materials that are flammable or may cause fire.</p>

**SECTION 8
CONTROL MEASURE /
PERSONAL PROTECTIVE
EQUIPMENT****Ventilation :**

Generally not required special provisions for the regulation of ventilation in normal conditions.

Respiratory Protection :

No special provision is required under normal conditions.

Eye protection :

Use eye protection.

Skin Protection :

No special equipment is needed. However, provisions - provisions for personal hygiene should always be.

Exposure Limits :

This product contains no ingredients - ingredients that have been known to have a threshold value of exposure. However, the threshold limit value can be used (Threshold Limit Value) of the steam is 5:00 mg/m³.

SECTION 9**PHYSICAL AND CHEMICAL PROPERTIES**

Property	Min	Max
Specific Gravity at 60.60 °F	0.820	0.87
Color ASTM	-	3.0
Cetane Number or Alternatively Calculated Cetane Index	45 48	-
Viscosity kinematic at 100 °F cSt Or Viscosity SSU at 100 °F secs	1.6 35	5.8 45
Pour Point °C	-	65
Sulphur content % wt	-	0.5
Copper Strip (3 hrs/100 °C)	-	No. 1
Conradson Carbon Residue % wt (on 10% vol. Bottom)	-	0.1
Water Content % vol	-	0.05
Sediment % wt	-	0.01
Ash Content % wt	-	0.01
Neutralization Value :		
- Strong Acid Number mg KOH/gr	-	Nil
- Total Acid Number mg KOH/gr	-	0.6
Flash Point P.M.c.c. °F	150	-
Distillation :		
- Recovery at 300 °C % vol.		

**SECTION 10
REACTIVITY****Stability (*thermal, light, etc*) :**

Stable.

Circumstances / Situation What to Avoid :

High heat.

Incompatibility (materials to avoid) :

Strong oxidizing agents.

Hazardous Decomposition Materials :

Carbon monoxide. Metal oxides. Oxide elements.

**SECTION 11****TOXICOLOGICAL INFORMATION****ACUTE TOXICOLOGY**

Oral Toxicity (rat)	:	Non-toxic (LD50 : > 2000 mg/kg) Based on tests on similar material and components.
Skin Toxicity (rabbit)	:	Non-toxic (LD50; > 2000 mg/kg) Based on tests on similar material and components.
Inhalation Toxicity (rat)	:	Non-toxic (LC50; > 5 mg/l) Based on tests on similar material and components.
Eye Irritation (rabbit)	:	Non-irritating. <i>Draize score</i> ; > 6, but < 15 Based on tests on similar material and components.
Skin Irritation (rabbit)	:	Non-irritating. (<i>Primary Irritation Index</i> ; >0.5, but < 3) Based on tests on similar material and components.

TOXICOLOGY SUBKRONIK

Experiments conducted on mice with exposure through the skin for 5 days / week for 90 days at an estimated exposure dose is higher than normal conditions. In this experiment carried out observations of the organ - the inner organs and clinical chemistry of body fluids, but the result indicates that this product does not have an adverse effect.

REPRODUCTIVE TOXICOLOGY

Exposure is carried out on pregnant mice with a representative on the dose does not provide a detrimental effect on both the parent and offspring.

CHRONIC TOXICOLOGY

Base Oil contained in this product is a solvent refined or hydrotreated. Studies carried out by applying this product on the skin of rats showed no carcinogenic effects.

OTHER TOXICOLOGY DATA

Experiments in the laboratory of this product after use in gasoline-fueled vehicles carcinogenic showed activity in the skin. This is especially true if the use of these products do not rinse the wearer's hand. But on this product after use in diesel vehicles do not provide a carcinogenic effect.

**SECTION 12
TOXICOLOGY DATA**

Influence and damage to the environment
To fish Rainbow Trout Acute Jauvenile LC/EC50 :
Non-toxic.
based test similar to the material.

**SECTION 13
DISPOSAL CONSIDERATIONS**

Waste Disposal :
This product can be burned in an enclosed place for the purpose of obtaining energy, or burned in incineration. This product can also be processed on site recycling of materials that have been determined by the government.

Regulatory Legislation :
Unused product, not listed as hazardous waste based on the classification of the EPA, this material is also not designed to contain hazardous components. This product does not show properties - properties such as ignitability hazardous, corrosion and formulated not contain contaminants - contaminants that require determination by the TCLP (Toxicity Characteristic Leaching Procedure). However, for products that have been used to further regulation.



<p>SECTION 14 TRANSPORTATION INFORMATION</p>	<p>USA DOT Shipping Name : Diesel Fuel Hazard Class & DIV : Combustible Liquid ID Number : NA 1993 ERG Number : 128 Packing Group : PG III Dangerous When Wet : No Poison : No Placard (s) : Combustible</p> <p>RID/ADR Hazard Class : 3 Hazard Sub Class : 31 (c) Label : 3 Danger Number : 30 UN Number : 1202 Shipping Name : Gas Oil</p> <p>IMO Hazard Class & DIV : 3.3 UN Number : 1202 Packing Group : PG III Shipping Name : Gas Oil Label : Flammable Liquid</p> <p>ICAO/IATA Hazard Class & DIV : 3 ID/UN Number : 1202 Packing Group : PG III Label (s) : Flammable Liquid</p>
<p>SECTION 15 INFORMATION</p>	<p>Inventory Status: listed on TSCA, EINECS / ELINCS.</p> <p>EU LABELING Symbol : Xn (harmful). Risk Phrase(s) : R40 Possible risk of irreversible effects. Safety Phrase(s) : S24-2-3-36/37-62 Avoid contact with skin. Keep out of reach of children. Wear protective clothing and special gloves. If swallowed, do not stimulate vomiting, seek medical help.</p>
<p>SECTION 16 OTHER INFORMATION</p>	<p>Warning Labels : AROMATIC CONTAINING PETROLEUM OIL HARMFUL IF CONTACT WITH SKIN. COMBUSTIBLE! CAN CAUSE SKIN CANCER, DAMAGE TO HEART, BLOOD COMPONENTS OF DAMAGE, AND DANGEROUS FOR THE BABY IN THE CONTENT.</p> <p>The condition and suitability of the product for particular uses are beyond us; all risk of use of the product is borne by the user. Warning signs and procedures for handling this product should be owned by users and others who handle these products. Forbidden to change this document, except with the approval of the law.</p>