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MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION AND COMPANY

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Product Name : PETRO TURBINE 46  
Product Type : PREMIUM INDUSTRIAL TURBINE OIL  
Company : KAWASAN PERKANTORAN ALAM SUTERA TOWN  
CENTER, BLOK 10H NO.18 TANGERANG.  
Tlp : (021) 292 11 565 Fax : (021) 292 11 566

2. COMPOSITION

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Mineral Oil Content 95 %  
Additives Content 5 %

3. HAZARDS IDENTIFICATION

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Human Health Product is not hazardous  
Eye Contact Slightly irritant  
Skin Contact Prolonged or repeated contact may irritate skin  
Inhalation Repeated and repeated contact may irritate skin  
Ingestion Minimal toxicity  
Safety Hazards Not classified as flammable but will burn  
Environmental Not readily biodegradable  
Hazards

#### 4. FIRST AID

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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

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Flash Point	>170°C
Flammable Limits	LEL 1.0 UEL 6.0
Autoignition Temp	>220°C
Specific Hazards	Not classified as flammable but will burn. Hazardous combustion product 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

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Clean-up Procedures 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

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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

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Exposure Limits	Threshold Limit Values for oil mist is recommended to be controlled at 5 mg/m <sup>3</sup> 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
Body Protection	Use proper protection equipment to avoid contact. Wear PVC apron if splashes are likely to occur

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical State	Liquid
Colour	Clear & Bright
Odour	Characteristic mineral oil
Vapour Pressure	<0.5 Pa at 20°C
Density	0.874 g/cm <sup>3</sup> at 15°C
Kinematic Viscosity @ 40°C	46 cSt
Kinematic Viscosity @ 100°C	6,9 cSt
Pour Point	-18 °C
Flash Point	222 °C
pH of undiluted product	Not available
Auto-ignition temperature	>220°C
Solubility in water	Negligible

10. STABILITY AND REACTIVITY

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Stability	Product is stable under normal use conditions
Thermal Decomposition	Carbon monoxide, carbon dioxide, oxides of sulphur and nitrogen 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

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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	Slight 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 accumulate 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

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Basis	No ecological data is available for this product. Information is provided base on the additives, other components and base stock used.
Mobility	Liquid under most environmental conditions. Floats on water. It is absorbeb by soil and will not be mobile
Persistence/	Not readily biodegradable. Major constituents are expected to be inherently Degradability 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 caused physical fouling of aquatic organisms

13. DISPOSAL CONSIDERATION

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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 ordisposed of. Ensure conformity to local disposal regulations.

14. TRANSPORT INFORMATION

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

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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 unfamiliar and since data made available susequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the result 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 expressed or implied of merchantability or fitness for particular purpose is made with respect to the product or the information contained herein.