

## SAFETY DATA SHEET

DATE OF ISSUE : 01. July. 2015

SHEET NO : Q-E-0102-02

### 1. IDENTIFICATION COMPANY/UNDERTAKING

A. PRODUCT NAME	LP 70
B. APPLICATION	WHITE OIL
C. SUPPLIER	
MANUFACTURER	KUKDONG OIL & CHEMICALS CO., LTD.
ADDRESS	334-36, Yusan-dong, Yangsan-si, Gyeongnam, Korea
EMERGENCY TELEPHONE	+82-55-370-9900

### 2. HAZARDS IDENTIFICATION

A. CLASSIFICATION  
 Physical - Chemical Hazards : Not Classified  
 Human health : Aspiration Hazard : 1

B. Labeling  
 Hazard Pictogram :



Signal Word : Danger  
 Hazard Statement : H304 May be fatal if swallowed and enters airways  
 Precautionary Statements  
     : P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
     : P271 Use only outdoors or in a well-ventilated area.  
     : P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
     : P331 Do NOT induce vomiting.  
     : P405 Store locked up.  
     : P501 Dispose of contents/container to (in accordance with local/regional/national/international regulation).

C. NFPA HAZARD ID :

Health	Flammability	Reactivity
1	1	0

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	Common Name	CAS No	EINECS No	ECL serial No	WT%
WHITE MINERAL OIL (PETROLEUM)	WHITE MINERAL OIL	8042-47-5	232-455-8	KE-35412	100

### 4. FIRST AID MEASURES

Inhalation  
 Inhalation at ambient temperature is unlikely because of the low vapour pressure of the substance.

Symptoms: irritation of the respiratory tract due to excess fume, mists or vapour exposure.

In case of symptoms arising from inhalation of fumes, mists or vapour: Remove casualty to a quiet and well ventilated place if safe to do so

If the casualty is unconscious and:

- Not breathing – ensure that there is no obstruction to breathing and give artificial respiration by trained personnel. If necessary, give external cardiac massage and obtain medical assistance.
- Breathing: place in recovery position. Administer oxygen if necessary.  
Obtain medical assistance if breathing remains difficult.

#### Skin Contact

Symptoms: dry skin, irritation may arise in case of repeated or prolonged exposure.

May cause burn in case of contact with product at high temperature

Remove contaminated clothing and footwear, and dispose of safely.

Wash affected area with soap and water.

Seek medical attention if skin irritation, swelling or redness develops and persists.

(if applicable) When using high-pressure equipment, injection of product can occur. If high-pressure injuries occur, immediately seek professional medical attention. Do not wait for symptoms to develop.

For minor thermal burns: Cool the burn. Hold the burned area under cold running water for at least five minutes, or until the pain subsides. However, body hypothermia must be avoided.

Do not put ice on the burn; Remove non-sticking garments carefully.

DO NOT attempt to remove portions of clothing glued to burnt skin but cut round them.

Seek medical attention in all cases of serious burns

#### Eye Contact

Symptoms: slight irritation (unspecific). May cause burn in case of contact with product at high temperature

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so.

Continue rinsing

If irritation, blurred vision or swelling occurs and persists, obtain medical attention.

If hot product is splashed into the eye, it should be cooled immediately to dissipate heat, under cold running water.

Immediately obtain specialist medical assessment and treatment for the casualty.

#### Ingestion

Symptoms: few or no symptoms expected. If any, nausea and diarrhea might occur.

(if applicable) Always assume that aspiration has occurred. Seek professional medical attention or send the casualty to a

hospital. Do not wait for symptoms to develop.

Do not induce vomiting as there is a risk of aspiration.

Do not give anything by mouth to an unconscious person.

## 5. FIRE-FIGHTING MEASURES

- Extinguishing Media
- Foam (Specifically trained personnel only)
  - Water fog (Specifically trained personnel only)
  - Dry chemical powder
  - Carbon dioxide
  - Other inert gases (subject to regulations)
  - Sand or earth

Unsuitable Extinguishing Media Do not use direct water jets on the burning product; they could cause splattering and spread the fire.

	Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.
Combustion Products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.
Protective Equipment for Firefighters	In case of a large fire or in confined or poorly ventilated spaces wear full fire resistant protective clothing and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. ACCIDENTAL RELEASE MEASURES

General Information	<p>Stop or contain leak at the source if safe to do so. Avoid direct contact with released material. Stay upwind.</p> <p>Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. It is recommended to eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares).</p> <p>If required, notify relevant authorities according to all applicable regulations..</p>
Personal Protection Equipment for Emergency Responders	<p>Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material.</p> <p>Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: gloves made of PVA are not water-resistant, and are not suitable for emergency use.</p> <p>Work helmet. Antistatic non-skid safety shoes or boots.</p> <p>Goggles or face shield, if splashes or contact with eyes is possible or anticipated.</p> <p>Respiratory protection will be necessary only in special cases (e.g. formation of mists). A half or full-face respirator with combined dust/organic vapour filter(s), or a Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible only SCBA's should be used.</p>
Land Spillage	<p>Prevent product from entering sewers, rivers, waterways or other bodies of water</p> <p>If necessary dike the product with dry earth, sand or similar non-combustible materials.</p> <p>Large spillages may be cautiously covered with foam, if available, to limit fire risk.</p> <p>Do not use direct jets</p> <p>When inside buildings or confined space, ensure adequate ventilation</p> <p>Absorb spilled product with suitable non-combustible materials.</p> <p>Collect free product with suitable means. Transfer collected product and other contaminated materials to suitable tanks or containers for recycle, recovery or safe disposal.</p> <p>In case of soil contamination, remove contaminated soil for remediation or disposal according to local regulations.</p>
Spillages in Water or at Sea	<p>In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents</p> <p>If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means.</p>

The use of dispersants should be advised by an expert, and, if required, approved by local authorities.  
Collect recovered product and other contaminated materials in suitable tanks or containers for recovery or safe disposal.

Additional  
Information

Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions. For this reason, local experts should be consulted when necessary.  
Local regulations may also prescribe or limit actions to be taken.

## 7. HANDLING AND STORAGE

### General Information

Ensure that all relevant regulations regarding handling and storage facilities of combustible products are followed.  
It is recommended to keep away from sparks/open flames/hot surfaces. – No smoking.  
Use and store only outdoors or in a well-ventilated area.  
Avoid contact with the product.  
Avoid release to the environment.

### Handling

Take precautionary measures against static electricity.  
Avoid splash filling of bulk volumes when handling hot liquid product.  
Avoid contact with skin. Avoid breathing fume/mist.  
Prevent the risk of slipping.  
Use personal protective equipment as required.  
For more information regarding protective equipment and operational conditions for a substance which is classified according to classification notes, see exposure scenarios. These risk management measures represent a worst case. For a non-classified substance proportionate information may be found in the Safety Data Sheet.

### Storage

Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation.  
Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills.  
Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.  
Store separately from oxidizing agents.

### Recommended and Unsuitable Materials for Storage

Recommended materials: For containers, or container linings use mild steel, stainless steel.  
Unsuitable materials: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use.  
Compatibility should be checked with the manufacturer.

### Container Advice

If the product is supplied in containers:

- Keep only in the original container or in a suitable container for this kind of product.
- Keep containers tightly closed and properly labeled.
- Empty containers may contain combustible product residues. Do not weld, solder,

drill, cut or perform similar operations unless they have been properly cleaned.

#### Hygiene Measures

- Ensure that proper housekeeping measures are in place.
- Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets.
- Keep away from food and beverages.
- Do not eat, drink or smoke when using this product.
- Wash the hands thoroughly after handling.
- Change contaminated clothes at the end of working shift.

Load/Unload Temperature, °C    Ambient

Storage Temperature, °C        Ambient

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limit	TLV/TWA	5mg/m <sup>3</sup> mist
	TLV/STEL	10mg/m <sup>3</sup> mist

#### Engineering Controls

- Ventilation equipment should be explosion-resistant if explosive concentrations of material are present.
- Ensure compliance with applicable exposure limits.
- Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

#### Respiratory Protection

- No special respiratory protection is normally required.
- Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

#### Eye protection

- Normal industrial eye protection practices should be employed.

#### Skin Protection

- Wear suitable gloves to avoid direct skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Water white liquid
Odor	Characteristic, mineral oil
Odor Threshold	Not established
pH	Not applicable
Melting Point / Freezing Point	Not established
Initial Boiling Point and Boiling Range	Not established
Flash Point	>200°C (COC)
Evaporation Rate	Not established
Flammability	Not applicable
Upper/Lower Flammability or Explosive Limi	Not established
Vapor Pressure@ 20°C	Not established
Vapor Density	Not established
Relative Density@ 15°C	0.8340 (15/4°C)
Solubility in Water	Negligible
Partition Coefficient : n-Octanol/Water	Not established
Auto-ignition Temperature	Not established

Decomposition Temperature	Not established
Viscosity	11 -13.5 cSt @ 40°C
PCA %(IP346)	<3%

## 10. STABILITY AND REACTIVITY

Stability (Thermal, Light, etc)	Stable under normal temperature & pressure
Condition to Avoid	Extreme heat
Incompatibility (Materials to avoid)	Strong oxidizers
Hazardous Decomposition Products	Carbon monoxide
Hazardous polymerization	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 >5000 mg/kg Practically non-toxic.
Acute Dermal Toxicity	LD50 >2000 mg/kg Practically non-toxic.
Acute Inhalation Toxicity	LC50 >5.0 mg/L Practically non-toxic.
Skin Irritation	Either only weakly irritating or not irritating to the skin of rabbits and humans
Eye Irritation	Practically non-irritating.
Corrosivity	No corrosive action of this substance is expected
Skin Sensitization	This substance is not considered to be dermal sensitizer.
Respiratory Sensitization	This substance is not expected to cause respiratory sensitization
Repeat Dose Toxicity	Sub-chronic repeat dose dermal : NOAEL 1000 mg/kg Sub-chronic repeat dose inhalation : NOAEL (local effects) > 220 mg/m <sup>3</sup> and NOAEL (systemic effects) > 980 mg/m <sup>3</sup> This substance is not classified for repeat-dose toxicity
Mutagenicity	This substance was found to be non-mutagenic.
Carcinogenicity	The DMSO extract by IP 346 of this substance is less than 3%. Consequently it is not classified as a carcinogen.
Toxicity for Reproduction	Reproductive toxicity dermal NOAEL (development) > 2000 mg/kg This substance showed no effects on reproductive parameters

## 12. ECOLOGICAL INFORMATION

Ecotoxicity	Acute aquatic invertebrate EL50 > 10,000mg/l Acute aquatic algae NOEL > 100mg/l Acute fish LL50 > 100 mg/l Long-term invertebrate NOEL 10mg/l Long-term fish NOEL 10mg/l
Environmental Fates	This material is not expected to present any environmental problems other than those associated with oil spills.

## 13. DISPOSAL CONSIDERATIONS

This product is a controlled waste. Collect and dispose of waste product at an authorized facility, in conformance with national and local regulations, and in accordance with EEC Directives on the disposal of waste oil.

## 14. TRANSPORT INFORMATION

Land transport (ADR/RID/), Inland waterway transport (AND(R)), Marine transport (IMDG), Air transport ICAO/IATA	
UN Number	Not applicable. Not classified as dangerous for transport.
Proper Shipping Name and Description	Not applicable. Not classified as dangerous for transport.
Chemical Name	Not applicable. Not classified as dangerous for transport.

Class	Not applicable. Not classified as dangerous for transport.
Classification Code	Not applicable. Not classified as dangerous for transport.
Packaging Group	Not applicable. Not classified as dangerous for transport.
EmS Number	Not applicable. Not classified as dangerous for transport.
Labels	Not applicable. Not classified as dangerous for transport.
Marine Pollutant	No
Remarks	None

## 15. REGULATORY INFORMATION

### GOVERNMENTAL INVENTORY STATUS

EINECS, TSCA, AICS, DSL, IECSC, ENCS, ECL, PICCS, NZIoC, SWISS, ASIA-PAC

### US EPA SARA TITLE III

SARA (Superfund Amendments and Reauthorization Act of 1986)

Sec.302: EPA SARA Title III Section 302 Extremely Hazardous Chemical.

Sec.313: EPA SARA Title III Section 313 Toxic Release Inventory.

Sec.110: EPA SARA 110 Superfund Site Priority Contaminant List

### US EPA CAA, CWA

CWA NPDES: EPA Clean Water Act NPDES Permit Chemical

CAA HAP: EPA Clean Air Act Hazardous Air Pollutant

CAA ODC: EPA Clean Air Act Ozone Depleting Chemical

CA PROP 65: California Proposition 65

## 16. OTHER INFORMATION

### SOURCE OF KEY DATA

The recommendations presented in this Material Safety Data Sheet were compiled from actual test data when available, comparison with similar products, component information from suppliers and from recognized codes of good practice.

The data and recommendation presented herein are based on our research and the research of others, and are believed to be accurate. No guarantee of their accuracy is made; however, and the products discussed are distributed without warranty, express or implied, and the person receiving them shall make his own determination of the suitability thereof for his particular purpose.

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