

1. IDENTIFICATION

PRODUCT NAME : PARACOS KF-70
CHEMICAL FAMILY / DESCRIPTION : Petroleum Hydrocarbons
TRADE NAMES / SYNONYMS : Liquid Paraffin, White Oil, White Mineral Oil
COMPANY : SEOJIN CHEMICAL CO.,LTD.
ADDRESS : 491-1, Yongyeon-Dong, Nam-Gu, Ulsan, Korea
TELEPHONE : +82-52-712-0482
FAX : +82-52-257-0486
EMERGENCY TELEPHONE No : Above or Local Representative

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION

PHYSICAL HAZARDS

EXPLOSIVES	Not an explosive
FLAMMABLE GASSES	Not classified
FLAMMABLE AEROSOLS	Not classified
OXIDIZING GASES	Not classified
GASES UNDER PRESSURE	Not classified
FLAMMABLE LIQUIDS	Not classified
FLAMMABLE SOLIDS	Not classified
SELF-REACTIVE SUBSTANCES	Not classified
PYROPHORIC LIQUIDS	Not classified
PYROPHORIC SOLIDS	Not classified
SELF-HEATING SUBSTANCES	Not classified
SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES	Not classified
OXIDIZING LIQUIDS	Not classified
OXIDIZING SOLIDS	Not classified
ORGANIC PEROXIDES	Not classified
CORROSIVE TO METALS	Not classified

HEALTH AND ENVIRONMENTAL HAZARDS

ACUTE TOXICITY	Category 4
SKIN CORROSION/IRRITATION	Category 3
SERIOUS EYE DAMAGE /EYE IRRITATION	Category 2B
RESPIRATORY OR SKIN SENSITIZATION	Not classified
GERM CELL MUTAGENICITY	Not classified
CARCINOGENICITY	Not classified (High-level refined oil)



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REPRODUCTIVE TOXICITY	Not classified
SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY	
- SINGLE EXPOSURE	Not classified
- REPEATED EXPOSURE	Not classified
HAZARDOUS TO THE AQUATIC ENVIRONMENT	
- ACUTE AQUATIC TOXICITY	Not classified
- CRONIC AQUATIC TOXICITY	Not classified

SYMBOL



Exclamation Mark

SIGNAL WORD

Warning

HAZARD STATEMENT

Harmful if swallowed

Causes eye irritation

Causes mild skin irritation

PRECAUTIONARY STATEMENTS

- Prevention

Avoid breathing fume/mist/vapors/spray.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wash hands thoroughly after handling.

Wear protective gloves/clothing (as specified by the manufacturer/supplier or the competent authority).

- Response

Call a POISON CENTER or doctor/physician if you feel unwell.

Continue rinsing.

If eye irritation persists, get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs, get medical advice/attention.



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IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Remove contact lenses, if present and easy to do.

Rinse mouth.

Specific measures (see ... on this label) ... reference to supplemental first aid instruction - if immediate measures such as specific cleansing agent is advised.

Wash contaminated clothing before reuse.

Wash hands after handling.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>WT%</u>	<u>CAS No.</u>	<u>EINECS No.</u>	<u>ECL Serial No.</u>
White mineral oil(petroleum)	100	8042-47-5	232-455-8	KE-35412

4. FIRST AID MEASURES

- EYE CONTACT** : Flush eyes with plenty of water for at least 15 minutes.
If irritation occurs, call a physician.
- SKIN CONTACT** : As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.
- INHALATION** : Remove victim to fresh air. Check for clear airway, breathing, and pressure of pulse. Consult a physician immediately
- INGESTION** : If swallowed, dilute by drinking large amounts of water.
Never give anything by mouth to a convulsing or unconscious person.
Do not induce vomiting. Consult a physician immediately.

5. FIRE-FIGHTING MEASURES

- EXTINGUISHING MEDIA** : Foam, Water Fog, CO₂, Dry Chemical, Sand
- FIRE FIGHTING PROCEDURES** : Use foam and water spray carefully to prevent excessive frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposure.
- FIRE FIGHTING INSTRUCTIONS** : For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency.
- UNUSUAL FIRE AND EXPLOSION HAZARDS** : Slight when exposed to heat or flame; can react with oxidizing materials.
- COMBUSTION PRODUCTS** : Normal combustion forms carbon dioxide and water vapor, incomplete combustion can produce smoke and carbon monoxide.



6. ACCIDENTAL RELEASE MEASURES

- PERSONAL PRECAUTIONS** : See Section 8.
- PROCEDURES IF MATERIAL IS RELEASED OR SPILLED** : Stop flow. Eliminate all sources of ignition, flammables. Avoid inhalation (excessive). Avoid dermal contact (excessive). Absorb or scrape up. Wash site of spillage thoroughly with soap and water. Remove soiled clothing. Observe governmental spill & water quality regulations.
- ENVIRONMENTAL PRECAUTIONS** : Prevent spills from entering sewers or drains and contact with soil.
- WASTE DISPOSAL** : Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

7. HANDLING AND STORAGE

- HANDLING** : No special precautions are necessary beyond normal good hygiene practices, but it should be handled in suitable containers and spillage avoided.
- STORAGE** : Do not store in open or unlabelled containers. Store away from strong oxidizing agents or combustible material.
- LOAD/UNLOAD TEMPERATURE, °C** : Ambient
- STORAGE TEMPERATURE, °C** : Ambient

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- | | <u>TLV/TWA</u> | <u>TLV/STEL</u> |
|-----------------------|-------------------------|--------------------------|
| EXPOSURE LIMIT | 5mg/m ³ mist | 10mg/m ³ 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.
- PERSONAL PROTECTIVE EQUIPMENT (PPE)**
- 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	: Bright and clear liquid
COLOR	: Water white
ODOR	: Characteristic, mineral oil
ACIDITY/ALKALINITY	: Not applicable
FLASH POINT	: 202 °C
AUTO IGNITION TEMPERATURE	: 260 ~371 °C
MELTING POINT	: Not applicable
FLAMMABILITY	: Not applicable
AUTO FLAMMABILITY	: Not established
EXPLOSIVE PROPERTIES	: Not applicable
OXIDIZING PROPERTIES	: Not applicable
VAPOR PRESSURE @ 20°C	: <0.1 kPa
VAPOR DENSITY	: >5 (air = 1)
RELATIVE DENSITY @ 15°C	: 0.834(water = 1)
SOLUBILITY IN WATER	: Negligible
OCTANOL/MOISTURE	: $\log P_{ow} = 3.9 \sim 6$ (calculated value)
DISTRIBUTION FACTOR	
PARTITION COEFFICIENT	: Expected to be >7
VISCOSITY @ 40°C	: 12.2 cSt
POUR POINT	: -24°C
FREEZING POINT	: Not established

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT ETC.)	: Stable under normal temperature & pressure
CONDITIONS TO AVOID	: Extreme heat
INCOMPATIBILITY (MATERIALS TO AVOID)	: Strong oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS	: Carbon monoxide
HAZARDOUS POLYMERIZATION	: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICOLOGY

ORAL TOXICITY (RATS)	: LD ₅₀ >5000 mg/kg Practically non-toxic.
DERMAL TOXICITY (RABBITS)	: LD ₅₀ >5000 mg/kg Practically non-toxic.
INHALATION TOXICITY (RATS)	: Not applicable. Harmful concentrations of mists and/or vapors are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of this product.
EYE IRRITATION (RABBITS)	: Practically non-irritating.
SKIN IRRITATION (RABBITS)	: Practically non-irritating.



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CHRONIC TOXICOLOGY

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

The DMSO extract by IP 346 of the oil is less than 3%. (Typical 0.2% with Maximum 0.5%)

Consequently it is not classified as a carcinogen.

The base oil in this product is severely hydro-treated by all hydro-processing route. By this refining history would be showed no evidence of carcinogenic potential.

12. ECOLOGICAL INFORMATION

ECOTOXICITY : Chronic Toxicity to Fish, NOEC: > 5000mg/L (7day) - IUCLID Dataset
Chronic Toxicity to Aquatic Invertebrates, NOEC = 552 mg/L (7day) - IUCLID Dataset
** NOEC: No Observed Effect Concentration (toxicology)

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

INTERNATIONAL REGULATION

INFORMATION OF MARINE REGULATION : No dangerous materials

INFORMATION OF AERONAUTICAL REGULATION : No dangerous materials

DOMESTIC REGULATION

INFORMAION OF OVERLAND REGULATION : Not applicable

INFORMATION OF MARINE REGULATION : No dangerous materials

INFORMATION OF AERONAUTICAL REGULATION : No dangerous materials

Not dangerous for conveyance.

Keep containers closed when not in use. Prevent small spill and leakage to avoid slip hazard.

TRANSPORT TEMPERATURE, °C : Ambient

15. REGULATORY INFORMATION

EC DANGEROUS SUBSTANCES/PREPARATIONS : Not regulated.

CLASSIFICATION



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GOVERNMENTAL INVENTORY STATUS

(Distillate, Hydrotreated light/heavy Paraffines) is listed on the following inventories:

EINECS (European Inventory of Existing Commercial Chemical Substances), June 15, 1991

TSCA (US, Toxic Substances Control Act), December, 2006

AICS (Australian Inventory of Chemical Substances), June, 1996

DSL (Canadian Domestic Substances List), January 26, 1991

IECSC (Chinese Chemical Inventory)

ENCS (Japanese Existing and New Chemical Substances)

ECL (Korean Existing Chemical Number), January, 1997

PICCS (Philippine Inventory of chemicals and Chemical Substances), 2000

NZIoC (New Zealand Inventory of Chemicals), 2006

SWISS (Swiss Giftliste 1 and Inventory of Notified New Substances)

US EPA SARA TITLE III

Hazardous Components (Chemical Name)	Cas #	Sec.302	Sec. 313	Sec. 110
White mineral oil(petroleum),	8042-47-5	No	No	No

**** 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

Hazardous Components (Chemical Name)	Cas #	EPA CAA	EPA CWA NPDES	CA PROP 65
White mineral oil(petroleum),	8042-47-5	No	No	No

****Other Important Lists:**

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



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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.

- Globally Harmonized System of classification and labeling of chemicals(GHS), First revised edition, United Nations.
- United States National Library of Medicine.
- EINECS (European Inventory of Existing Commercial chemical Substances)
- IUCLID Dataset (International Uniform Chemical Information Database, 2000)
- IARC (International Agency for Research on Cancer.) Volume 45, 33

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