

Safety Data Sheet
acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: December 20, 2019

1 Identification

- **Product identifier**
- **Trade name:** KL™ HpH
- **Other means of identification:** No other identifiers
- **Recommended use and restriction on use**
- **Recommended use:** Membrane Cleaner
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
King Lee Technologies
8949 Kenamar Drive. Bldg 107
San Diego, CA 92121
858-693-4062
klt@kingleetech.com
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**

Skin Irrit. 2 H315 Causes skin irritation.
Eye Dam. 1 H318 Causes serious eye damage.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms:**



GHS05

- **Signal word:** Danger

- **Hazard statements:**

H315 Causes skin irritation.
H318 Causes serious eye damage.

- **Precautionary statements:**

P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection.
P302+P352 If on skin: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a poison center/doctor.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

- **Other hazards** There are no other hazards not otherwise classified that have been identified.

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Components:**

Trade Secret salt 1 ⚠ Eye Irrit. 2A, H319	<75%
Trade Secret salt 2 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	<20%
Trade Secret chelating agent ⚠ Eye Dam. 1, H318 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332	<10%
Trade Secret salt 3 ⚠ Skin Irrit. 2, H315 Combustible Dust	<10%

- **Additional information:** Additional non-hazardous components are not required to be listed. For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

- **Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Protect unharmed eye.
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**
Coughing
Irritant to skin and mucous membranes.
Strong irritant with the danger of severe eye injury.
Gastric or intestinal disorders when ingested.
- **Indication of any immediate medical attention and special treatment needed:**
No relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray.
- **For safety reasons unsuitable extinguishing agents:** No relevant information available.
- **Special hazards arising from the substance or mixture**

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Formation of toxic gases is possible during heating or in case of fire.

- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information:** Cool endangered product with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Avoid formation of dust.
Avoid breathing dust.
Wear protective equipment. Keep unprotected persons away.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation.

- **Environmental precautions**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Damp down dust with water spray.

- **Methods and material for containment and cleaning up**

Pick up mechanically.
Send for recovery or disposal in suitable receptacles.

- **Reference to other sections**

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**

- **Precautions for safe handling:**

Use only in well ventilated areas.
Prevent formation of dust.
Avoid breathing dust.
Avoid contact with the eyes and skin.

- **Information about protection against explosions and fires:**

Avoid dust cloud formation. Keep ignition sources away. No smoking.

- **Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:**

Storage area should be dry and well-ventilated.
Store in cool, dry conditions in well sealed receptacles.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.
Protect from humidity and water.

- **Specific end use(s)** No relevant information available.

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8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

Trade Secret salt 2

WEEL (USA) | Short-term value: 5 mg/m³

· **Exposure controls**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· **Engineering controls:** Provide adequate ventilation.

· **Breathing equipment:**

Not required under normal conditions of use.
Use suitable respiratory protective device in case of insufficient ventilation.
NIOSH or EU approved dust respirator should be used for operations generating dust.
Particulate mask should filter at least 99% of airborne particles.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

No relevant information available.

· **Risk management measures** No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **Appearance:**

Form:	Powder
Color:	Colorless to tan
Odor:	Not determined.
Odor threshold:	Not determined.

· **pH-value:** 11.2±1.5 (1% solution)

· **Melting point/Melting range:** Not determined.

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· Boiling point/Boiling range:	Not determined.
· Flash point:	The product is not flammable.
· Flammability (solid, gaseous):	Not applicable.
· Auto-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits	
Lower:	Not determined.
Upper:	Not determined.
· Oxidizing properties:	Not determined.
· Vapor pressure:	Not determined.
· Density:	
Relative density:	Not determined.
Vapor density:	Not determined.
Evaporation rate:	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong oxidizing agents.
Reacts with acids.
- **Conditions to avoid**
Prevent formation of dust.
Avoid acids.
- **Incompatible materials**
Oxidizers
Strong acids
- **Hazardous decomposition products**
Under fire conditions only:
Carbon monoxide and carbon dioxide

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Phosphorus oxides (e.g. P2O5) (Cont'd. of page 5)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**

Trade Secret salt 1

Oral | LD50 | 3,800-4,200 mg/kg (rat)

Trade Secret chelating agent

Oral | LD50 | 1,500-1,900 mg/kg (rat)

- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **IARC (International Agency for Research on Cancer):**
Present in trace quantities.

75-21-8	Ethylene oxide		1
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- **NTP (National Toxicology Program):**
Present in trace quantities.

75-21-8	Ethylene oxide		K
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- **OSHA-Ca (Occupational Safety & Health Administration):**
Present in trace quantities.

75-21-8	Ethylene oxide		
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- **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**

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Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- **Uncleaned packagings**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**

- DOT, ADR, IMDG, IATA Not regulated.

- **UN proper shipping name**

- DOT, ADR, IMDG, IATA Not regulated.

- **Transport hazard class(es)**

- DOT, ADR, IMDG, IATA

- Class Not regulated.

- **Packing group**

- DOT, ADR, IMDG, IATA Not regulated.

- **Environmental hazards**

- Marine pollutant: No

- **Special precautions for user**

Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **United States (USA)**

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· **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

Trade Secret salt 2

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

Present in trace quantities.

75-21-8	Ethylene oxide	10000
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· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Present in trace quantities.

75-21-8	Ethylene oxide
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· **Chemicals known to cause developmental toxicity for females:**

Present in trace quantities.

75-21-8	Ethylene oxide
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· **Chemicals known to cause developmental toxicity for males:**

Present in trace quantities.

75-21-8	Ethylene oxide
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· **Chemicals known to cause developmental toxicity:**

Present in trace quantities.

75-21-8	Ethylene oxide
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· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

Present in trace quantities.

75-21-8	Ethylene oxide	1
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· **Canadian Domestic Substances List (DSL) (Substances not listed.):**

All ingredients listed on DSL or NDSL.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

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LD50: Lethal dose, 50 percent
PBT: Persistent, Bio-accumulable, Toxic
vPvB: very Persistent and very Bioaccumulative
OSHA: Occupational Safety & Health Administration
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor_internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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