

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations


Printing date: October 10, 2019

Revision: October 10, 2019

1 Identification

- **Product identifier**
- **Trade name:** Diamite™ 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**
Eye Dam. 1 H318 Causes serious eye damage.
Carc. 2 H351 Suspected of causing cancer.
STOT RE 2 H373 May cause damage to the kidneys, the liver, the respiratory system and the nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS05 GHS08
- **Signal word:** Danger
- **Hazard statements:**
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H373 May cause damage to the kidneys, the liver, the respiratory system and the nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
- **Precautionary statements:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P310 Immediately call a poison center/doctor.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P314 Get medical advice/attention if you feel unwell.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

	Trade Secret emulsifier		10-40%
	Trade Secret chelating agent	 STOT RE 2, H373 Eye Dam. 1, H318 Acute Tox. 4, H302; Acute Tox. 4, H332	<10%
111-42-2	2,2'-iminodiethanol	 Carc. 2, H351; STOT RE 2, H373 Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Irrit. 2, H315	<10%
	Trade Secret salt	 Eye Dam. 1, H318	<10%

· **Additional information:** Additional non-hazardous chemical 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.
 Provide oxygen treatment if affected person has difficulty breathing.

· **After skin contact:**

Immediately remove any clothing soiled by the product.
 Immediately rinse with water.
 If skin irritation is experienced, 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:**

May cause respiratory irritation.
 Coughing
 Breathing difficulty
 Gastric or intestinal disorders when ingested.
 Nausea

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Diarrhea.

Vomiting.

Slight irritant effect on skin and mucous membranes.

Causes serious eye irritation.

· **Danger:**

Causes serious eye damage.

Suspected of causing cancer.

May cause damage to the kidneys, the liver, the respiratory system and the nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.

· **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**

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.

6 Accidental release measures

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

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** Avoid release to the environment.

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

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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:**

Open and handle receptacle with care.

Use only in well ventilated areas.

Avoid contact with the eyes and skin.

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Avoid breathing mist, vapors, or spray.

- **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.
Use only receptacles specifically permitted for this substance/product.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from metals.
Do not store together with acids.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

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

Trade Secret emulsifier

TLV (USA)	Long-term value: 5 mg/m ³
EL (Canada)	Long-term value: 5 mg/m ³
EV (Canada)	Long-term value: 3.1 mg/m ³ , 0.5 ppm
LMPE (Mexico)	Long-term value: 5 mg/m ³

111-42-2 2,2'-iminodiethanol

REL (USA)	Long-term value: 15 mg/m ³ , 3 ppm
TLV (USA)	Long-term value: 1* mg/m ³ , 0.2* ppm Skin; *inhalable fraction and vapor
EL (Canada)	Long-term value: 2 mg/m ³ Skin, IARC 2B
EV (Canada)	Long-term value: 2 mg/m ³
LMPE (Mexico)	Long-term value: 2 mg/m ³ A3, PIEL

- **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.
Avoid breathing mist, vapors, or spray.

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

- **Breathing equipment:**

Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.

- **Protection of hands:**

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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:** Liquid
· **Color:** Colorless to light brown.

· **Odor:** Not determined.

· **Odor threshold:** Not determined.

· **pH-value:** Alkaline

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

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

· **Flash point:** >93 °C (>199.4 °F)

· **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.

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- **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:** Reacts with acids.
- **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.
Corrosive action on metals.
Strong exothermic reaction with acids.
- **Conditions to avoid** Avoid acids.
- **Incompatible materials**
Metals.
Strong acids
- **Hazardous decomposition products**
Under fire conditions only:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
May be harmful if swallowed, in contact with skin or if inhaled.
Based on available data, the classification criteria are not met.

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

Trade Secret chelating agent

Oral	LD50	1700 mg/kg (rat)
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111-42-2 2,2'-iminodiethanol

Oral	LD50	1600 mg/kg (rat)
Dermal	LD50	12200 mg/kg (rabbit)

- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **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):**

111-42-2	2,2'-iminodiethanol	
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· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **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:** Suspected of causing cancer.

· **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:**

May cause damage to the kidneys, the liver, the respiratory system and the nervous system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.

· **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:**

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

· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

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**

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· **DOT, ADR/RID/ADN, IMDG, IATA** Not regulated.

· **UN proper shipping name**
· **DOT, ADR/RID/ADN, IMDG, IATA** Not regulated.

· **Transport hazard class(es)**
· **DOT, ADR/RID/ADN, IMDG, IATA**
· **Class** Not regulated.

· **Packing group**
· **DOT, ADR/RID/ADN, 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)**
· **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):**
111-42-2 | 2,2'-iminodiethanol

· **TSCA (Toxic Substances Control Act)**
All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**
111-42-2 | 2,2'-iminodiethanol

· **Chemicals known to cause developmental toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

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None of the ingredients are listed.

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

111-42-2 | 2,2'-iminodiethanol

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· **Canadian Domestic Substances List (DSL):**

All ingredients are listed or exempt.

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

LD50: Lethal dose, 50 percent

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

Carc. 2: Carcinogenicity – Category 2

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/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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