LKT Laboratories, Inc.

Safety Data Sheet

Section 1. Product and Company Identification

Product Name Hydroquinone

Product ID H9618

Chemical Name (Synonyms) Aida, Eldoquin, Eldopaque, Tecquinol

Supplier

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Section 2. Hazards Identification

GHS Classification

Acute toxicity, Oral (Category 4) H302
Skin sensitization (Category 1) H317
Serious eye damage (Category 1) H318
Germ cell mutagenicity (Category 2) H341
Carcinogenicity (Category 2) H351
Acute aquatic toxicity (Category 1) H400
Chronic aquatic toxicity (Category 1) H410

GHS Label elements including precautionary statements

Pictogram

Signal word **Danger**

Hazard and precautionary statements

Hazard statements
H302 - Harmful if swallowed.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H341 - Suspected of causing genetic defects.
H351 - Suspected of causing cancer.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust, fumes, gas, mist, vapors, spray.
P264 - Wash skin thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P302 + P352 - IF ON SKIN: Wash with plenty of sap and water.
P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 - IF exposed or concerned: Get medical advice/ attention.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 2
Chronic health hazard: *
Flammability: 1
Physical hazard: 0

NFPA Rating

Health hazard: 2
Fire hazard: 1
Reactivity hazard: 0

Potential Health Effects

Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.
Skin - May be harmful if absorbed through skin. May cause an allergic skin reaction.
Eyes - Causes serious eye damage.
Ingestion - Acute toxicity. Harmful if swallowed.

Carcinogenicity - Suspected of causing cancer.
Germ call mutagenicity - Suspected of causing genetic defects.

Section 3. Composition/Information on Ingredients

Substances Ingredient: Title Compound Percent: 100

Formula $C_6H_6O_2$ **Formula Wt.** 110.11

CAS No. 123-31-9 **EC No.** 204-617-8

Section 4. First Aid Measues

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact Flush eyes with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash off with soap and plenty of water. Consult a physician.

Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 . Firefighting Measures

Flash Point 165˚C

Extingushing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Firefighting Procedures Wear self-contained breathing apparatus for firefighting if necessary.

Unusual Fire Hazards Not available.

Section 6. Accidental Release Measures

Personal Precautions Use personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleanup Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Handling Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: +4˚C

Hazardous Decomposition Products Hazardous decomposition products formed under fire conditions. - Carbon oxides.

Other Remarks Oxidizes rapidly.

Section 8. Exposure Controls/Personal Protection

Personal protective equipment

EXPOSURE CONTROLS
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
PERSONAL PROTECTION
Eye/face protection: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full and splash contact - Material: Nitrile rubber, Minimum layer thickness: 0.11 mm, Break through time: 480 min., Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M).
Body protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9. Physical and Chemical Properties

Physical State	Solid.	**Color**	White to off-white powder.
Boiling Point	285-287°C	**Volatility**	Not available.
Melting Point	170-171°C	**Density**	Not available.
Solubility	Soluble in alcohol or ether. Slightly soluble in benzene.	**pH**	Not available.
Flash Point	165˚C	**Ignition temperature**	Not available.
Lower explosion limit	Not available.	**Autoignition temperature**	515.56˚C
Upper explosion limit	Not available.	**Vapor pressure**	1 hPa at 132˚C
Water solubility	Not available.	**Odor**	Not available.
Partition coefficient: n-octanol/water	log Pow: 0.59	**Odor Threshold**	Not available.
Relative vapor density	3.80 - (Air = 1.0)	**Evaporation rate**	Not available.

Section 10. Stability and Reactivity

Stability	Stable under recommended storage conditions.
Materials To Avoid	Strong bases and strong oxidizing agents.
Hazardous Decomposition Products	Hazardous decomposition products formed under fire conditions. - Carbon oxides.

Possibility of hazardous reactions Not available.

Conditions to avoid Not available.

Section 11. Toxicological Information

Oral LD50 Rat - 367.3 mg/kg
(OECD Test Guideline 401)

Inhalation LC50 Not available.

Dermal LD50 Rabbit - > 2,000 mg/kg
(OECD Test Guideline 402)

Other information on acute toxicity Not available.

Reproductive Toxicity Not available.

Specific organ toxicity single exposure (GHS) Not available.

Specific organ toxicity repeated exposure (GHS) Not available.

Teratogenicity Not available.

Skin corrosion/irritation Not available.

Serious eye damage/irritation Not available.

Respiratory or skin sensitization in vivo assay - Mouse
Result: May cause sensitization by skin contact. May cause allergic skin reaction.
(OECD Test Guideline 429)

Germ cell mutagenicity Laboratory experiments have shown mutagenic effects. In vitro tests showed mutagenic effects.
DNA repair Rat - Liver cells. Result: negative
Mutagenicity (micronucleus test)
Mouse Result: positive.

Aspiration Hazard Not available.

Synergistic effects Not available.

Additional Information RTECS: MX3500000
To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Signs and symptoms of exposure Liver - irregularities - based on human evidence.
Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

Potential Health Effects
Inhalation - May be harmful if inhaled. May cause respiratory tract irritation.
Skin - May be harmful if absorbed through skin. May cause an allergic skin reaction.
Eyes - Causes serious eye damage.
Ingestion - Acute toxicity. Harmful if swallowed.
Carcinogenicity - Suspected of causing cancer.
Germ call mutagenicity - Suspected of causing genetic defects.

Carcinogenicity This product is or contains a components that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP or EPA classification. Limited evidence of carcinogenicity in animal studies.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Section 12. Ecological Information

Toxicity Toxicity to fish - LC50 - Oncorhynchus mykiss (rainbow trout) - 0.04 - 0.1 mg/l - 96.0 h.
Toxicity to daphnia and other aquatic invertebrates. - EC50 - Daphnia magna (Water flea) - 0.13 mg/l - 48 h.
Toxicity to algae - EC50 - Pseudokirchneriella

Mobility in soil Not available.

PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not

subcapitata (green algae) - 0.335 mg/l - 72 h.

Persistence and degradability Biodegradability - Biotic/Aerobic - Exposure time 14 d Result: 86% - Readily biodegradable.

Bioaccumulative potential Bioaccumulation - Leuciscus idus (Golden orfe) - 3 d - 50 µg/l.
Bioconcentration factor (BCF): 40

conducted.

Other adverse effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

Section 13. Disposal Considerations

Waste Disposal Dispose of material according to all federal, state and local regulations.
Offer material to a licensed, professional waste disposal company to dispose of as unused product. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Section 14. Transport Information

DOT (US) UN number: 3077 Class: 9 Packing Group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Hydroquinone)
Reportable Quantity (RQ): 100 lbs. Poison inhalation hazard: No.

IATA UN number: 3077 Class: 9 Packing Group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Hydroquinone)
Marine pollutant: yes.

IMDG UN number: 3077 Class: 9 Packing Group: III EMS #: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Hydroquinone)

Further Information EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or . 5kg for solids.

Section 15. Regulatory Information

Reach No.

SARA 302 Components SARA 302: The following components are subject to reporting levels established by SARA Title III, Section 302:
Hydroquinone CAS #: 123-31-9 Revision Date: 2007-07-01

SARA 313 Components SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313:
Hydroquinone CAS #: 123-31-9 Revision Date: 2007-07-1

SARA 311/312 Components Acute health hazard, chronic health hazard.

Massachusetts Right To Know Components Hydroquinone CAS #: 123-31-9 Revision Date: 2007-07-1

Pennsylvania Right To Know Components Hydroquinone CAS #: 123-31-9 Revision Date: 2007-07-1

New Jersey Right To Know Components Hydroquinone CAS #: 123-31-9 Revision Date: 2007-07-1

California Prop 65 Components This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.

Section 16. Other Information

Other information The information in this document is believed to be correct but is not necessarily complete. LKT does not guarantee the accuracy of the information. The burden of verifying the information in this document rests solely upon the user.

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For emergencies in the USA, call
CHEMTREC 800-424-9300