

Section 1. Product and Company Identification

Product Name Hydroquinone
CAS Number 123-31-9

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
☎ (914) 654-6800 ☎ (914) 654-6899
🌐 parchem.com ✉ info@parchem.com

EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302
Serious eye damage (Category 1), H318
Skin sensitization (Category 1), H317
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

Pictograms:



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/fume/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/ eye protection/ face protection.
- P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
- 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 or doctor/ physician.
- P321 Specific treatment (see supplemental first aid instructions on this label).
- P330 Rinse mouth.
- 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.

Hazards not otherwise classified (HNOC) or not covered by GHS: none

Section 3. Composition / Information on Ingredients

Common Name Hydroquinone
Synonym(s) 1,4-Benzenediol; 1,4-Dihydroxybenzene
Formula C₆H₆O₂
CAS Number 123-31-9

COMPONENT	CAS NUMBER	CONCENTRATION
Hydroquinone	123-31-9	90 - 100%

Section 4. First Aid Measures

Description of first-aid measures

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

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

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

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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



Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling and/or in section 11

Indication of any immediate medical attention and special treatment needed: no data available

Section 5. Firefighting Measures

Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: no data available

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

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 cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections: For disposal see section 13.

Section 7. Handling and Storage

Precautions for safe 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.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place.

Section 8. Exposure Controls / Personal Protection

Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Hydroquinone	123-31-9	TWA	1 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Eye irritation Eye damage Confirmed animal carcinogen with unknown relevance to humans Sensitizer		
		TWA	2 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	2 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2 mg/m ³	USA. NIOSH Recommended Exposure Limits
		15 minute ceiling value		

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Hydroquinone	123-31-9	Methemoglobin	1.5%	In blood	ACGIH - Biological Exposure Indices (BEI)
	Remarks	During or end of shift			

Exposure controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

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.

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).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9. Physical and Chemical Properties

Appearance Form: crystalline

Color: colorless

Odor: no data available

Odor Threshold: no data available

pH: 3.7 at 70 g/l

Melting point/freezing point: 171°C (340°F)

Initial boiling point and boiling range: 285°C (545°F) at 1,013 hPa (760 mmHg)

Flash point: 165°C (329°F) - closed cup

Evaporation rate: no data available

Flammability (solid, gas): no data available

Upper/lower flammability or explosive limits: no data available

Vapor pressure: 1 hPa (1 mmHg) at 132°C (270°F)

Vapor density: 3.80 - (Air = 1.0)

Relative density: 1.332 g/cm³

Water solubility: 50 g/l

Partition coefficient: noctanol/water: log Pow: 0.59

Auto-ignition temperature: 515.56°C (960.01°F)

Decomposition temperature: no data available

Viscosity: no data available

Explosive properties: no data available

Oxidizing properties: no data available

Other safety information

Bulk density: 550 - 650 kg/m³

Solubility in other solvents: Methanol; Diethylether

Relative vapor density: 3.80 - (Air = 1.0)

Section 10. Stability and Reactivity

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: no data available

Conditions to avoid: No data available

Incompatible materials: Strong bases, Strong oxidizing agents

Hazardous decomposition products: Other decomposition products - no data available. In the event of fire: see section 5

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

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

Inhalation: no data available

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

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data 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

Carcinogenicity: This product is or contains a component 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: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydroquinone)

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.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available



Additional Information: RTECS: MX3500000

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.

Liver - Irregularities - Based on Human Evidence

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 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

Mobility in soil: no data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not 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 Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT (US)

UN number: UN3077

Class: 9

Packing group: III

Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Hydroquinone)

Reportable Quantity (RQ): 100 lbs

Marine pollutant:

Poison Inhalation Hazard: No



IMDG

UN number: UN3077

Class: 9

Packing group: III

EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Hydroquinone)

Marine pollutant: No

IATA

UN number: UN3077

Class: 9

Packing group: III

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

SARA 302 Components: The following components are subject to reporting levels established by SARA Title III, Section 302:

Hydroquinone	CAS-No.	Revision Date
	123-31-9	2007-07-01

SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313:

Hydroquinone	CAS-No.	Revision Date
	123-31-9	2007-07-01

SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard

Massachusetts Right to Know Components

Hydroquinone	CAS-No.	Revision Date
	123-31-9	2007-07-01

Pennsylvania Right To Know Components

Hydroquinone	CAS-No.	Revision Date
	123-31-9	2007-07-01



New Jersey Right To Know Components

Hydroquinone	CAS-No.	Revision Date
	123-31-9	2007-07-01

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

HMIS Rating

Health hazard: 2*

Flammability: 1

Physical Hazard 0

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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