

Safety Data Sheet

1. Chemical product and company identification

Product name : Hydroquinone

SDS code : E6-05

Company/undertaking identification :

HAYASHI PURE CHEMICAL IND.,LTD.

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URL : <https://www.hpc-j.co.jp/>

Emergency number : 06-6910-7305

Recommended use : For research and experimental use only.

Restrictions on use : Do not use on a human body or for animal medicines, foods, household products, cosmetics, etc.

2. Hazards identification

GHS classification

Physical hazards	Explosives	No classification
	Flammable gases	No classification
	Aerosol	No classification
	Oxidizing gases	No classification
	Gases under pressure	No classification
	Flammable liquids	No classification
	Flammable solids	classification not possible
	Self-reactive substances and mixtures	No classification
	Pyrophoric liquids	No classification
	Pyrophoric solids	No classification
	Self-heating substances and mixtures	classification not possible
	Substances and mixtures which in contact with water emit flammable gases	No classification
	Oxidizing liquids	No classification
	Oxidizing solids	No classification
	Organic peroxides	No classification
	Corrosive to metals	classification not possible
	Desensitized explosives	classification not possible
Health hazards	Acute toxicity (oral)	Category 4
	Acute toxicity (dermal)	No classification
	Acute toxicity (inhalation:gas)	No classification
	Acute toxicity (inhalation:vapors)	classification not possible
	Acute toxicity (inhalation:dust/mist)	classification not possible
	Skin corrosion/irritation	No classification
	Serious eye damage/eye irritation	Category 1
	Respiratory sensitization	classification not possible
	Skin sensitization	Category 1
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 2
	Reproductive toxicity	No classification
	Specific target organ toxicity (single exposure)	Category 1 (central nervous system)

Environmental hazards	Specific target organ toxicity (repeated exposure)	Category 2 (kidneys, liver)
	Aspiration hazard	classification not possible
	Hazardous to the aquatic environment, short-term (acute)	Category 1
	Hazardous to the aquatic environment, long-term (chronic)	Category 1
	Hazardous to the ozone layer	classification not possible

Hazard pictograms (GHS JP)



GHS05



GHS07



GHS08



GHS09

Signal word (GHS JP)

: Danger

Hazard statements (GHS JP)

: Harmful if swallowed (H302)
 May cause an allergic skin reaction (H317)
 Causes serious eye damage (H318)
 May cause genetic defects (H340)
 Suspected of causing cancer (H351)
 Causes damage to organs (central nervous system) (H370)
 May cause damage to organs (kidneys, liver) through prolonged or repeated exposure (H373)
 Very toxic to aquatic life with long lasting effects (H410)

Precautionary statements (GHS JP)

Prevention

: Obtain special instructions before use. (P201)
 Do not handle until all safety precautions have been read and understood. (P202)
 Do not breathe dust/fume/gas/mist/vapors/spray. (P260)
 Wash hands, forearms and face thoroughly after handling. (P264)
 Do not eat, drink or smoke when using this product. (P270)
 Contaminated work clothing should not be allowed out of the workplace. (P272)
 Avoid release to the environment. (P273)
 Wear protective gloves/protective clothing/eye protection/face protection. (P280)

Response

: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. (P301+P312)
 IF ON SKIN: Wash with plenty of water. (P302+P352)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
 IF exposed or concerned: Call a POISON CENTER or doctor. (P308+P311)
 Immediately call a POISON CENTER or doctor. (P310)
 Get medical advice/attention if you feel unwell. (P314)
 Rinse mouth. (P330)
 If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)
 Take off contaminated clothing and wash it before reuse. (P362+P364)
 Collect spillage. (P391)

Storage

: Store locked up. (P405)

Disposal

: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

3. Composition/information on ingredients

Distinction of substance or mixture : Substance
Synonyms : 1,4-benzenediol

Name	Concentration or Concentration range	Formula	Kanpo number		CAS RN
			CSCL no	ISHL no	
Hydroquinone	≥99.0%, ≤100%	C6H6O2	(3)-543	Existing Chemical Substance	123-31-9

The above concentration or concentration range are not product specification.

All percentages listed in the above concentration or concentration range are wt%, unless otherwise specified.

4. First aid measures

First aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
Get immediate medical advice/attention.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing.
Gently wash with plenty of soap and water.
Get immediate medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get immediate medical advice/attention.

First-aid measures after ingestion : Rinse mouth.
Get immediate medical advice/attention.

5. Fire fighting measures

Suitable extinguishing media : Water spray, Foam, Dry powder, Carbon dioxide, Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

Explosion hazard : May induce explosion of containers by heating.

Hazardous decomposition products in case of fire : In case of fire, product may produce irritative or toxic fumes/gases.

Firefighting instructions : If ignited, for the initial fire-fighting, cut off combustion sources, extinguish fire at a stroke using appropriate fire-extinguishers.
In the case of peripheral fire, quickly remove movable containers to safe places.
If unable to be moved containers, sprinkle water to containers and surrounding equipment, etc. to cool.
Avoid (reject) fire-fighting water to enter environment.
Even after extinguishing fire, thoroughly cool containers by using plenty of water.

Protection during firefighting : Wear appropriate fire-resistant clothing including self contained-compressed air breathing apparatus.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Before entering, ventilate the area.
Do not let unauthorized persons come close to the area.
Immediately place the leakage area in isolation, with taking proper distances for all directions.
Wear appropriate personal protective devices to prevent inhalation and contact with eye, skin, and clothing, and never attempt to work on the lee.

Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent entry to sewers and public waters.

Methods and Equipment for Containment and Cleaning up

Methods for cleaning up : Take care not to generate dust, sweep it up as much as possible, collect it in an empty container that can be sealed, and move it to a safe place.
Wash out the spilled area with large amounts of water.

7. Handling and storage

Handling

- Technical measures : Work with appropriate personal protective equipment to prevent inhalation or contact to eyes, skin, and clothing.
Handle with care to prevent leakage, overflowing, or scattering, minimize generation of mist or vapor, and thoroughly ventilate.
- Precautions for safe handling : Do not eat, drink or smoke when using this product.
Thoroughly wash your hands and gargle after handling.
Ensure good ventilation of the work station.
Do not contact, breathe or swallow.
- Prevents handling of incompatible substances or mixtures : Avoid prolonged or repeated exposure.

Storage

- Storage conditions : Store locked up.
Store in a well-ventilated place, away from direct sunlight. Keep container tightly closed and keep away from fire and heat sources.
- Material used in packaging/containers : Light shielding airtight container.
- Technical measures : Comply with applicable regulations.
- Storage temperature : Cool and dark place

8. Exposure controls / Personal protection equipment

Exposure limit values

Hydroquinone

Exposure limits (ACGIH)	TWA 1 mg/m ³ , STEL -
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- Appropriate engineering controls : Cover up tightly the generation source at the handling place or install local exhaust equipment or overall ventilation equipment. Install safety showers and eye-fountains near a handling place. Clearly indicate the location.

Protective equipment

- Respiratory protection : Dustproof mask
- Hand protection : Protective gloves
- Eye protection : Protective glasses (general glasses, glasses with side-shields, goggles)
- Skin and body protection : Protective clothing, Protective boots, Protective apron

9. Physical and chemical properties

- Physical state : Solid
- Appearance : Crystals
- Color : white ~ Grayish white
- Odor : Odorless
- pH : No data available
- Melting point : 171 – 174 °C
- Freezing point : No data available
- Boiling point : 287 °C
- Flash point : 165 °C (Cleveland open cup)
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor pressure : 0.12 Pa (20°C)
- Relative density : No data available
- Density : 1.33 g/cm³ (20°C)
- Relative gas density : No data available
- Solubility : Water: 5.9 g/100ml (15°C)
- Partition coefficient n-octanol/water (Log Pow) : 0.59
- Explosive limits (vol %) : No data available
- Viscosity, kinematic : No data available

Particle characteristics : No data available

10. Stability and reactivity

Reactivity : No data available
 Chemical stability : Stable under normal handling conditions.
 Possibility of hazardous reactions : Reacts violently with strong bases. In the case of powder or granules, mixing with air may cause dust explosion.
 Conditions to avoid : Sunlight, heat. Contact with strong bases.
 Incompatible materials : Strong bases
 Hazardous decomposition products : No data available

11. Toxicological information

The information in this section is based on the "GHS Classification Results" by NITE.

Hydroquinone	
Acute toxicity (oral)	Category 4
Acute toxicity (dermal)	No classification
Acute toxicity (gas)	No classification
Acute toxicity (vapour)	classification not possible
Acute toxicity (inhalation:dust/mist)	classification not possible
Skin corrosion/irritation	No classification
Serious eye damage/irritation	Category 1
Respiratory sensitization	classification not possible
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 2
Reproductive toxicity	No classification
STOT-single exposure	Category 1
STOT-repeated exposure	Category 2
Aspiration hazard	classification not possible

12. Ecological information

The information in this section is based on the "GHS Classification Results" by NITE.

Hydroquinone	
Hazardous to Aquatic Environment - Acute Hazard	Category 1
Hazardous to Aquatic Environment - Chronic Hazard	Category 1
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Hazardous to the ozone layer	classification not possible

13. Disposal considerations

Ecology - waste materials : With the detail information of the waste, subcontract its disposal to a waste disposer authorized by a Prefectural Governor.
 Contaminated container and packaging : Empty the packaging completely prior to disposal.
 Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG) : 3077
 Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Packing group (IMDG)	: III
Transport hazard class(es) (IMDG)	: 9
Hazard labels (IMDG)	: 9
Class (IMDG)	: 9
Special provision (IMDG)	: 274, 335, 966, 967, 969
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP02, P002
Packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: BK1, BK2, BK3, T1
Tank special provisions (IMDG)	: TP33
Stowage category (IMDG)	: A
MFAG-No	: 171

Air transport(IATA)

UN-No. (IATA)	: 3077
Proper Shipping Name (IATA)	: Environmentally hazardous substance, solid, n.o.s.
Packing group (IATA)	: III
Transport hazard class(es) (IATA)	: 9
Hazard labels (IATA)	: 9
Class (IATA)	: 9
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
Special provision (IATA)	: A97, A158, A179, A197
ERG code (IATA)	: 9L

Marine pollutant : Applicable

Regulations in Japan

Regulatory information by sea	: Conform to the provisions of the Ship Safety Law.
Regulatory information by air	: Conform to the provisions of the Civil Aeronautics Law.
MFAG-No	: 171

Special transport precautions : When transporting, load containers so that they do not tip over, damage, drop or collapse. Make sure there is no leak in containers.

15. Regulatory information**National law**

Chemical Substances Control Law	: Priority Assessment Chemical Substances (Law Article 2, Para.5)
Industrial Safety and Health Law	: Mutagenic Existing Chemicals (Act, Art.57-5, Official Notice by Director of Labor Standards Bureau) Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18 Item 1, Item 2, Attached Table No.9) Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Item 1, Item 2, Attached Table No.9) Hydroquinone (Ordinance number : 461)
Japanese Poisonous and Deleterious Substances Control Law	: Not applicable
Fire Service Law	: Not applicable
Air Pollution Control Law	: Hazardous Air Pollutants (Central Environment Council Report No. 9)
Foreign Exchange and Foreign Trade Control Act	: Export Trade Control Ordinance appendix 1-16
Ship Safety Act	: Miscellaneous dangerous substances & articles (Dangerous Goods Notification Schedule first second and third Article Dangerous Goods Regulations)
Civil Aeronautics Law	: Miscellaneous dangerous substances & articles (Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)	: Class 1 Designated Chemical Substances (Act Art.2 para.2, Enforcement Order Art.1 Appended Table No.1) Hydroquinone (100%)

Labor Standards Act : Chemical Substances Causing Occupational Illnesses (Act Art.75, Para.2, Ordinance Attached Table 1-2, Item 4-1, MHLW Notification No.36 of 1978)

16. Other information

Data sources : Handbook of 17423 Chemical Products, The Chemical Daily Co, Ltd.
International Chemical Safety Cards.
National Institute of Technology and Evaluation (NITE).
2020 Emergency Response Guidebook (ERG 2020).

Other information : The SDS is copyrighted material of Hayashi Pure Chemical Ind, Ltd.
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