

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 01 Dec 2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Hydroquinone

1.1. Catalog No.:

687734

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
Am Wieseneck 7

04451 Cunnersdorf
Deutschland

Tel. +49 34291 3372-36
Fax. +49 34291 3372-39
contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Serious eye damage (Category 1), H318
Skin sensitisation (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 Classification according to EU Directives 67/548/EEC or 1999/45/EC
R40
R68
Xn Harmful R22
Xi Irritant R41
R43
N Dangerous for the
environment
R50

2.2. Label elements

2.2.1. Pictogram



2.2.2.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram Signal word Danger

Hazard statement(s)

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 statement(s)

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face 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.

P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard

Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : 1,4-Benzenediol

1,4-Dihydroxybenzene

Formula : C₆H₆O₂

Molecular weight : 110,11 g/mol

CAS-No. : 123-31-9

EC-No. : 204-617-8

Index-No. : 604-005-00-4

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component Classification Concentration

Hydroquinone

CAS-No.

EC-No.

Index-No.

123-31-9

204-617-8

604-005-00-4

Acute Tox. 4; Eye Dam. 1;

Skin Sens. 1; Muta. 2; Carc. 2;

Aquatic Acute 1; Aquatic

Chronic 1; H302, H317, H318,

H341, H351, H410

<= 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component Classification Concentration

Hydroquinone

CAS-No.

EC-No.

Index-No.

123-31-9

204-617-8

604-005-00-4

Xn, N, Carc.Cat.3, Mut.Cat.3,

R22 - R40 - R41 - R43 - R68 -

R50

<= 100 %

3.1.1. Formula

C₆H₆O₂

3.1.2. Molecular Weight (g/mol)

110.11

3.1.3. CAS-No.

123-31-9

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

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

In case of skin contact

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

In case of eye contact

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

If swallowed

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

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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

For personal protection see section 8.

6.2 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.

6.3 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.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Air and light sensitive.

Storage class (TRGS 510): Non Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 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 gloves 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

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance Form: crystalline
Colour: colourless
 - b) Odour No data available
 - c) Odour Threshold No data available
 - d) pH 3,7 at 70 g/l
 - e) Melting point/freezing point
Melting point/range: 172 - 175 °C - lit.
 - f) Initial boiling point and boiling range
285 °C - lit.
 - g) Flash point 165 °C - closed cup
 - h) Evaporation rate No data available
 - i) Flammability (solid, gas) No data available
 - j) Upper/lower flammability or explosive limits
No data available
 - k) Vapour pressure 1 hPa at 132 °C
 - l) Vapour density 3,80 - (Air = 1.0)
 - m) Relative density 1,332 g/cm³
 - n) Water solubility 50 g/l
 - o) Partition coefficient: noctanol/water
log Pow: 0,59
 - p) Auto-ignition temperature
515,56 °C
 - q) Decomposition temperature
No data available
 - r) Viscosity No data available
 - s) Explosive properties No data available
 - t) Oxidizing properties No data available
- 9.2 Other safety information
Bulk density 550 - 650 kg/m³
Solubility in other solvents
Methanol
Diethylether
Relative vapour density 3,80 - (Air = 1.0)

10. STABILITY AND REACTIVITY

- 10.1 Reactivity
No data available
 - 10.2 Chemical stability
Stable under recommended storage conditions
 - 10.3 Possibility of hazardous reactions
No data available
 - 10.4 Conditions to avoid
Air Light.
 - 10.5 Incompatible materials
Strong bases, Strong oxidizing agents
 - 10.6 Hazardous decomposition products
Other decomposition products - No data available
- In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 367,3 mg/kg

(OECD Test Guideline 401)

LD50 Dermal - Rabbit - > 2.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitisation

in vivo assay - Mouse

Result: May cause sensitisation 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)

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.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 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

12.2 Persistence and degradability

Biodegradability Biotic/Aerobic - Exposure time 14 d

Result: 86 % - Readily biodegradable

12.3 Bioaccumulative potential

Bioaccumulation Leuciscus idus (Golden orfe) - 3 d

- 50 µg/l

Bioconcentration factor (BCF): 40

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Hydroquinone)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Hydroquinone)

IATA: Environmentally hazardous substance, solid, n.o.s. (Hydroquinone)

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

14.6 Special precautions for user

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

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

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. For lab use only!