An ISO 9001: 2015 & GMP Certified Company Office: No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

Tel: +91 98200 41841 Email: info@ottokemi.com Web: www.ottokemi.com

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers

Product Name: Hydroquinone, 99%

Product Code: H 1535 CAS No: 123-31-9

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use: Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification OTTO CHEMIE PVT LTD

No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

1.4. Emergency telephone number

Phone no.: + 91 98200 41841 (10:00 am - 06:00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Acute toxicity, (Category 4) Serious eye damage, (Category

Skin sensitization, (Sub-category

1B)

Germ cell mutagenicity,

(Category 2) defects.

Carcinogenicity, (Category 2)

Short-term (acute) aquatic

hazard, (Category 1)

Long-term (chronic) aquatic

hazard, (Category 1)

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram Signal Word

Hazard Statements

H302

H317

H318

H341

H351

H410

Precautionary Statements

P273

P280

P301 + P312

P302 + P352 P305 + P351 + P338

P308 + P313

Supplemental Hazard Statements

Reduced Labeling (<= 125 ml) Pictogram

H302: Harmful if swallowed.

H318: Causes serious eye damage.

H317: May cause an allergic skin reaction.

H341: Suspected of causing genetic

H351: Suspected of causing cancer.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long

lasting effects.

Danger

Harmful if swallowed.

May cause an allergic skin reaction.

Causes serious eye damage.

Suspected of causing genetic defects.

Suspected of causing cancer.

Very toxic to aquatic life with long lasting effects.

Avoid release to the environment.

Wear protective gloves/ protective clothing/ eye protection/ face

protection.

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel

unwell.

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

rinsing.

IF exposed or concerned: Get medical advice/ attention.

none

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Signal Word Danger Hazard Statements

H317 May cause an allergic skin reaction. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H318 Causes serious eye damage.

Precautionary Statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face

protection.

IF ON SKIN: Wash with plenty of water. P302 + P352

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

rinsina.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard

Statements

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. Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 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

Component		Classification	Concentration
hydroquinone	TIME		
CAS-No. EC-No.	123-31-9 204-617-8	Acute Tox. 4; Eye Dam. 1; Skin Sens. 1B; Muta. 2; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H318, H317, H341, H351, H400, H410 M-Factor - Aquatic Acute: 10	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with

water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

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If swallowed

After swallowing: immediately make victim drink water (two glasses at most). 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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Čarbon dioxide (CO2) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by

keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Air and light sensitive.

Storage class

Storage class (TRGS 510): 11: Combustible Solids

7.3 Specific end use(s)

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

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: KCL 741 Dermatril® L

Body Protection protective clothing Respiratory protection

Recommended Filter type: Filter A-(P2)

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state crystalline b) Color colorless c) Odor No data available

d) Melting Melting point/range: 172 - 175 °C - lit.

point/freezing point 285 °C - lit. e) Initial boiling point

and boiling range

f) Flammability (solid,

gas) g) Úpper/lower

flammability or

explosive limits

h) Flash point

i) Autoignition

temperature

j) Decomposition temperature

165 °C at ca.1.013 hPa - closed cup 515.56 °C at 1.013 hPa

No data available

No data available

No data available

3,7 at 70 g/l

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k) pH

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I) Viscosity

m) Water solubility n) Partition coefficient: n-octanol/water o) Vapor pressure

p) Density Relative density q) Relative vapor

density r) Particle characteristics

s) Explosive properties t) Oxidizing properties

9.2 Other safety information Relative vapor

density 3,80 - (Air = 1.0) Viscosity, kinematic: No data available Viscosity, dynamic: No data available 72 g/l at 25 °C - completely soluble

log Pow: 0,59 at 20 - 25 °C - Bioaccumulation is not expected.

1 hPa at 132 °C

1,332 g/cm3 at 15 °C - (HSDB)

No data available No data available

No data available

No data available

none

SECTION 10: Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally

be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

increased reactivity with:

Aluminum

Risk of explosion with:

Oxygen

Exothermic reaction with:

Strong oxidizing agents

alkalines

Violent reactions possible with:

Sodium hydroxide

10.4 Conditions to avoid

Air Light.

Strong heating.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

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SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) -

0.638 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

and other aquatic

invertebrates

semi-static test EC50 - Daphnia magna (Water flea) - 0,134 mg/l -

(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 0,33 mg/l - 72 h

(OECD Test Guideline 201)

static test NOEC - Pseudokirchneriella subcapitata - 0,019 mg/l - 72

(OECD Test Guideline 201)

Toxicity to

fish(Chronic toxicity)

flow-through test NOEC - Pimephales promelas (fathead minnow) -

>= 0.1 mg/l - 32 d

(OECD Test Guideline 210)

Toxicity to daphnia

and other aquatic

invertebrates(Chronic

toxicity)

semi-static test LC50 - Daphnia magna (Water flea) - 0,061 mg/l -

(OECD Test Guideline 211)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 14 d

Result: 70 % - Readily biodegradable.

(OECD Test Guideline 301C)

12.3 Bioaccumulative potential

No data available

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 Endocrine disrupting properties

Product:

Assessment:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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SECTION 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 Tunnel restriction code : (-) 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

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

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

Authorisations and/or restrictions on use

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E1 ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.