

SECTION 1: Identification

1.1 Product identifiers

Product name:p-Benzoquinone

CAS-No. : 106-51-4

1.2 Relevant identified uses of the substance or mixture and uses advised against Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier

Barentz
16 Thorndal Circle
Darien, CT 06820

Phone: (603) 206-6500
Fax: (203) 329-6600

1.4 Emergency telephone number#

Chemtrec 800.424.9300 or 703.527.3887

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Oral (Category 3), H301 Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), H335 Skin irritation (Category 2), H315

Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16. Classification according to EU Directives 67/548/EEC or 1999/45/EC

T Toxic R23/25

Xi Irritant R36/37/38

N Dangerous for the environment R50

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)

H301 Toxic if swallowed. H315 Causes skin irritation.
 H319 Causes serious eye irritation.H331 Toxic if inhaled.
 H335 May cause respiratory irritation. H400 Very toxic to aquatic life.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P273 Avoid release to the environment.
 P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P311 Call a POISON CENTER or doctor/ physician.

Supplemental Hazard Statements none

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances Synonyms: Quinone Formula: C₆H₄O₂

Molecular Weight: 108.09 g/mol

CAS-No. : 106-51-4

EC-No. : 203-405-2

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

Component	Classification	Concentration
Quinone		
CAS-No. 106-51-4 EC-No. 203-405-2	Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Acute 1; H301 + H331, H315,H319, H335, H400	<=100%

Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
Quinone		
CAS-No. 106-51-4 EC-No. 203-405-2	T,N, R23/25 – R36/37/38-R50	<=100%

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 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. Take victim immediately to hospital. 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

SECTION 5: Firefighting 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 fire fighting if necessary.

5.4 Further information

no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. 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.

SECTION 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 .Normal measures for preventive fire protection.
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. Light sensitive. Exposure to moisture.

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing . Wash hands before breaks and immediately after handling the product.

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/ 686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness : 0,11 mm Break through time: 480 min

Splash contact Material: Nitrile rubber

Minimum layer thickness : 0,11 mm Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the

supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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 N99 (US) or type P2 (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

9.1 Information on basic physical and chemical properties

- a) Appearance Form: powder
Colour: yellow
- b) Odour no data available
- c) Odour Threshold no data available
- d) pH no data available
- e) Melting point/freezing point Melting point/range: 113 - 115 °C - lit.
- f) Initial boiling point and boiling range no data available
- g) Flash point no data available
- 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 0, 1 hPa at 25 °C
- l) Vapour density 4,33
- m) Relative density no data available
- n) Water solubility no data available
- o) Partition coefficient: octanol/ water log Pow: 0,2
- p) Auto-ignition temperature no data available
- q) Decomposition temperature 243 °C -
- r) Viscosity no data available
- s) Explosive properties no data available
- t) Oxidizing properties no data available

9.2 Other safety information

Surface tension 32,58 mN/m at 112 °C Relative vapour density 4,33

SECTION 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 no data available

10.5 Incompatible materials

Reacts violently with: Strong oxidizing agents

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1 Information on toxicological effects Acute toxicity

LD50 Oral - rat - 130 mg/kg LD50 Oral - mouse - 25 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Tremor. Skin and

Appendages: Other: Hair.

LD50 Oral - rat - 100 mg/kg Inhalation: no data available

Skin corrosion/irritation no data available

Serious eye damage/eye irritation no data available

Respiratory or skin sensitisation no data available

Germ cell mutagenicity no data available

Ames test

S. typhimurium

Histidine reversion (Ames) mouse

lymphocyte DNA damage

mouse lymphocyte DNA inhibition

mouse lymphocyte

Mutation in mammalian somatic cells.

Human lymphocyte

Sister chromatid exchange

mouse Embryo

Morphological transformation.

mouse lymphocyte

Other mutation test systems

Hamster Lungs

Micronucleus test

Human lymphocyte

Other mutation test systems

mouse Micronucleus test

Carcinogenicity

Carcinogenicity - mouse - Skin

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration: Tumors. Skin and Appendages: Other: Tumors.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Quinone)

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: DK2625000

burning sensation , Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Damage to the eyes.

no data available

Stomach - Irregularities - Based on Human Evidence

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 0,04 - 0,125 mg/l - 96,0 h Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 1 - 3,5 mg/l - 24 h

Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 0,08 mg/l - 4 h

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Very toxic to aquatic life.

SECTION 13: Disposal considerations**13.1 Waste treatment methods Product**

Offer surplus and non-recyclable solutions to a licensed disposal company . Contact a licensed professional waste disposal service to dispose of this material. 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.

SECTION 14: Transport information**14.1 UN number**

ADR/RID : 2587 IMDG: 2587 IATA: 2587

14.2 UN proper shipping name

ADR/RID: BENZOQUINONE IMDG: BENZOQUINONE

IATA: Benzoquinone

14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group

ADR/RID : 11 IMDG: 11 IATA: II

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user

no data available

SECTION 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

SECTION 16: Other information

Revision Date: 07/10/2019

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Acute toxicity

Aquatic Acute Acute aquatic toxicity Eye Irrit. Eye irritation

H301 Toxic if swallowed.

H301 + H331 Toxic if swallowed or if inhaled H315 Causes skin irritation.

H319 Causes serious eye irritation. H331 Toxic if inhaled.

H335 May cause respiratory irritation.

Full text of R-phrases referred to under sections 2 and 3

N Dangerous for the environment T Toxic

R23/25 Toxic by inhalation and if swallowed.

R36/37/38 Irritating to eyes, respiratory system and skin. R50 Very toxic to aquatic organisms .

Further information

The information above is believed to be accurate and represents the best information currently available to us.

However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.