Altus science

Material Safety Data Sheet

USP 1,4-Benzoquinone Rss – Muriatic Preserved

Section 1. Identification of Product and Company

1.1 Identification of substance or preparation: 1,4-benzoquinone Solutions
Synonyms: p-Benzoquinone 1,4-Benzoquinone, Quinone, Chinone, cyclohexadienedione,1,4-cyclohexadienedione, 1,4-Dioxybenzene

1.2 Product Application: This MSDS provides Health and Safety information from any 1,4-Benzoquinone (Muriatic preserved) component of the following vials or kits:

Altus Science Part Number	Product Name/Description/Range
(K) = Kit A-5040(K)	Total Organic Carbon (TOC) Calibration Standard, From 0.500mg/L C of 1,4 Benzoquinone

1.3 Company/Undertaking Identification:

Altus Science Limited
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Section 2. Hazards Identification

2.1 Hazard Summary:

Physical hazards: Not classified for physical hazards
Health hazards: Not classified for health hazards
Environmental hazards: Not classified for hazards to the environment

2.2 Label elements:

Contains: Hydrochloric acid, P-Benzoquinone, Water
Supplemental label information: Not applicable

2.3 Other hazards: Not assigned

Section 3. Composition/Information on Ingredients

3.1 Mixtures:

Chemical description: P-Benzoquinone solution

Compound Name	CAS-No.	EC No.	Concentration	CLP Classification - Reg No.
Water	7732-18-5	231-791-2	≥99.901%	Not applicable
P-Benzoquinone	106-51-4	203-405-2	≤0.09%	Acute Tox. 3;H301, Skin Irrit. 2;H315, Eye Irrit. 2;H319, Acute Tox. 3;H331, STOT SE 3;H335, Aquatic Acute 1;H400, Aquatic Chronic 1;H410
Hydrochloric acid	7647-01-0	231-595-7	0.009%	Skin Corr. 1B;H314 STOT SE 3,H335

Section 4. First Aid Measures

4.1 **Description of first aid measures:**

Skin Contact: Wash skin with plenty of water

Eye Contact: Flush eyes immediately with plenty of running water

Ingestion: If the victim is conscious, give 1-2 glasses of water

Inhalation: No treatment required

4.2 **Most important symptoms and effects, both acute and delayed:** Not applicable

4.3 **Indication of any immediate medical attention and special treatment needed:** Not available

Section 5. Fire Fighting Measures

5.1 **Extinguishing media:**

Suitable Extinguishing Media: This product does not represent a fire hazard since it contains a significant proportion of water

Unsuitable Extinguishing Media: None

5.2 **Special hazards arising from the substance or mixture:** None known

5.3 **Advice for fire-fighters:**

Special protective equipment for fire-fighters: No special protective equipment required

Special fire-fighting procedures: Not applicable

5.4 **Further information:** No data available

Section 6. Accidental Release Measures

6.1 **Personal precautions, protective equipment and emergency procedures:**

For non-emergency personnel: No special protective equipment is required

For emergency responders: Use personal protection recommended in Section 8 of the MSDS

6.2 **Environmental precautions:** No special environmental precautions required

6.3 **Methods and materials for containment and clean up:**

- Spills of the product could present a significant slip hazard depending on quantity and surface type
- Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements
- Contain and recover by physical means
- Clean small spills by diluting with sufficient quantities of water

6.4 **Reference to other sections:** Please refer to Section 8 for further information

Section 7. Handling and Storage

7.1 **Precautions for safe handling:** No special requirements

7.2 **Conditions for safe storage, including any incompatibilities:** Reasonable and safe chemical storage

Store in a closed container in a well ventilated storage area, away from incompatible materials

7.3 **Specific end use(s):** For professional and industrial users only

Section 8. Exposure Controls/Personal Protection

8.1 Control parameters

Occupational exposure limits - UK EH40 Workplace Exposure Limits (WEL's):

Components	Type	Value
Hydrochloric acid (7647-01-0)	STEL	8mg/m3
	TWA	2mg/m3

8.2 Exposure controls:

Biological Limit Values: No biological exposure limits noted for the ingredient(s)
Recommended monitoring procedures: Not available
Environmental exposure controls: Not applicable
Appropriate engineering controls: Adequate ventilation

Personal protective equipment:
Eye/face protection: Safety glasses
Skin protection: Protective gloves
Body protection: No special protective equipment required
Respiratory protection: In case of insufficient ventilation, use a breathing mask with filter types

Section 9. Physical and Chemical Properties

9.1 Physical and Chemical Properties:

Characteristic		Description
Appearance	***Physical State***	Liquid
	Colour	Colourless
Odour		Chlorine
Odour Threshold		Not available
pH (Concentrated product)		6.5
Melting point/freezing point		0°C
Initial boiling point and boiling range		100°C
Flash point		>100°C Pensky Martens (CC)
Evaporation rate		1 (Water=1)
Flammability (solid, gas)		Not available
Flammable Limit - lower		Not available
Flammable Limit - upper		Not available
Vapour pressure		18mm Hg at 21°C
Vapour density		Not applicable
Relative density		1
Water solubility		Completely soluble
Partition coefficient (n-Octanol/water)		Not available
Auto-ignition temperature		Not available
Decomposition temperature		Not available
Viscosity		Not available
Explosive properties		Not applicable
Oxidizing properties		Not applicable

9.2 **Other safety information:** No relevant additional information available

Section 10. Stability and Reactivity

10.1 **Reactivity:** Not available

10.2 **Chemical Stability:** Material is stable under normal conditions

10.3 **Possibility of hazardous reactions:** Not applicable

10.4 Conditions to avoid: No special requirement

10.5 Incompatible materials: None known

10.6 Hazardous decomposition products: hazardous polymerisation does not occur

Section 11. Toxicological Information

11.1 Information on toxicological effects:

Product/Component	LD50 Oral	LD50 Dermal
1,4-Benzoquinone -Acidified (Mixture)	Rat:>5000mg/kg (Calculated data)	Rabbit:>5000mg/kg (Calculated data)
P-Benzoquinone (Component)	Acute Oral. Rat: 130mg/kg	Acute Other LD50 Rat: 25mg/kg
Hydrochloric acid (Component)	Rabbit: 900mg/kg	Mouse: 1449mg/kg

Acute toxicity: Not classified

Skin corrosion/irritation: Not classified

Respiratory or skin sensitisation: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

Information on likely routes of exposure:

Ingestion: No specific symptoms known
Inhalation: Not expected to cause respiratory effects
Skin contact: Repeated exposure may cause skin dryness or cracking
Eye contact: Prolonged or repeated contact may cause transient irritation

Signs and symptoms of Exposure: Not available

Mixture versus substance information: Not available

Additional information: Not available

Section 12. Ecological Information

12.1 Toxicity:

Components	Test results
Hydrochloric acid (7647-01-0)	LC50 Western mosquitofish: 282mg/l 96 hours

12.2 Persistence and degradability: No data available

12.3 Bio accumulative potential: Not available

12.4 Mobility in soil: Not available

12.5 Results of PBT and vPvB assessment: Not available

12.6 Other adverse effects: Not available

12.7 Environmental fate - Partition coefficient: Not available

12.8 Summary: The product is not classified as dangerous for the environment. The evaluation of the environmental hazards is based on the concentration limits set out in directive 1999/45/EC

Section 13. Disposal Considerations

13.1 Waste treatment methods:

Product - According to Controlled Waste Regulations:
European Waste Code (EWC) recommendation: 16 03 04
16 Wastes not otherwise specified in the list
16 03 Off-specification batches and unused products
16 03 04 Inorganic wastes
Depending on the origin and state of waster, other EWC numbers may be applicable too

Contaminated packaging - According to Controlled Waste Regulations:
European Waste Code (EWC) recommendation: 15 01 02
15 Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01 Packaging (including separately collected municipal packaging waste)
15 01 02 Plastic packaging
15 01 06 Glass packaging
Depending on the origin and state of the waste, other EWC numbers may be applicable too

Section 14. Transport Information

14.1 ADR: Not regulated as dangerous goods

14.2 RID: Not regulated as dangerous goods

14.3 ADR: Not regulated as dangerous goods

14.4 IATA: Not regulated as dangerous goods

14.5 IMDG: Not regulated as dangerous goods

14.6 Special precautions for user: No data available

Section 15. Regulatory Information

15.1 Safety, health and environment regulations/legislation specific for the substance or mixture: No data available

15.2 Chemical safety assessment: No data available

15.3 Other regulations: This product does not need to be labelled in accordance with EC directives or respective national laws.

Section 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 present state of knowledge and is applicable to the product with regard to appropriate safety precautions. Altus Science Ltd shall not be held liable for any damage resulting from handling or from contact with the above product. Please refer to Terms and Conditions for further information of sale.

Abbreviations

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

RID - International Rule for Transport of Dangerous Substances by Railway

ADN - International Carriage of Dangerous Goods by Inland Navigation

IATA - International Air transport Association

IMDG - International Maritime Dangerous Goods Code

WEL - Workplace Exposure Limit

TWA - Time weighted Average

STEL - Short-term Exposure Limit

vPvB - Very persistent, very Bio accumulative

H301 - Toxic if swallowed

H314 - Causes severe skin burns and eye damage

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

H335 - May cause respiratory irritation

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects