# MATERIAL SAFETY DATA SHEET

# (QUININE HYDROCHLORIDE)

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name** : Quinine Hydrochloride

**Company Identification** : Nicotine Vault

Culver St, Somerville, NJ, 08876, USA

**Contact No.** : +1 (534) 444-6872

**For further enquiries** : Info@nicotinevault.com

## SECTION 2 - HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008 (CLP)**

| **Classification acc. to GHS** | | | |
|---|---|---|---|
| **Section** | **Hazard class** | **Hazard class & Hazard category** | **Hazard Statement** |
| 3.1O | acute toxicity (oral) | (Acute Tox. 4) | H302 |
| 3.4R | respiratory sensitisation | (Resp. Sens. 1A) | H334 |
| 3.4S | skin sensitisation | (Skin Sens. 1A) | H317 |

Section Hazard class Hazard class and category

Hazard

**Remarks**

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

**Label elements**

**Labelling according to Regulation (EC) No 1272/2008 (CLP)**

**Pictograms**

**Hazard statements**

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Precautionary statements**

**Precautionary statements - prevention**

| | |
|---|---|
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |

**Precautionary statements - response**

| | |
|---|---|
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P342+P311 | If experiencing respiratory symptoms: Call a POISON CENTER/doctor. |

**Precautionary statements - disposal**

P501 Dispose of contents/container to industrial combustion plant. **Labelling of packages where the contents do not exceed 125 ml**

Symbol(s)

| | |
|---|---|
| H317 | May cause an allergic skin reaction. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |

**Other hazards**

There is no additional information.

## SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS

**Substances**

| | |
|---|---|
| Name of substance | Quinine hydrochloride |
| EC number | 231-437-7 |
| CAS number | 6119-47-7 |
| Molecular formula | $C_{20}H_{25}ClN_2O_2 * 2\ H_2O$ |
| Molar mass | 396,9 g/mol |

## SECTION 4 - FIRST AID MEASURES

**Description of first aid measures**

**General notes**
Take off contaminated clothing.
**Following inhalation**
Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

**Following skin contact**
Rinse skin with water/shower. Brush off loose particles from skin. - In case of skin reactions, consult a physician.

**Following eye contact**
Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

**Following ingestion**
Rinse mouth with water (only if the person is conscious). Call a doctor.

**Most important symptoms and effects, both acute and delayed**
After eye contact: Irritant effects, Conjunctival redness of the eyes,
Following skin contact: Localised redness, oedema, pruritis and/or pain, Allergic reactions,
After ingestion: Nausea, Vomiting, Gastrointestinal complaints,
Following inhalation: Cough

**Indication of any immediate medical attention and special treatment needed** none

## SECTION 5 - FIRE FIGHTING MEASURES

**Extinguishing media**
**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings water
spray, foam, dry extinguishing powder, carbon dioxide (CO2)

**Unsuitable extinguishing media**
water jet

**Special hazards arising from the substance or mixture** Combustible.

**Hazardous combustion products**
In case of fire may be liberated: nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2), hydrogen chloride (HCl)

**Advice for firefighters**
Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

**Special protective equipment for firefighters**
Protective clothing against liquid and gaseous chemicals, including liquid aerosols and solid particles. Self-contained breathing apparatus (SCBA). Self-contained breathing apparatus (EN 133).

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**
**For non-emergency personnel**
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Do not breathe dust. Avoid contact with skin, eyes and clothes.

**Environmental precautions**
Keep away from drains, surface and ground water.

**Methods and material for containment and cleaning up**
**Advices on how to contain a spill**

Covering of drains.
**Advices on how to clean up a spill** Take
up mechanically. Control of dust.
**Other information relating to spills and releases** Place
in appropriate containers for disposal.

**Reference to other sections**
Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7 - HANDLING and STORAGE

**Precautions for safe handling**
Provision of sufficient ventilation.

**Measures to prevent fire as well as aerosol and dust generation** Removal of dust deposits.

**Advice on general occupational hygiene**
Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

**Conditions for safe storage, including any incompatibilities**
Store in a dry place. May cause decomposition by long-term light influence. Keep container tightly closed.

**Incompatible substances or mixtures** Observe hints for combined storage.

**Consideration of other advice**
**Ventilation requirements**

Use local and general ventilation.
**Specific designs for storage rooms or vessels** Recommended storage temperature: 15 - 25 °C.

**Specific end use(s)**
No information available.

## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

**Control parameters**
**National limit values**
**Occupational exposure limit values (Workplace Exposure Limits)**

| Country | Name of agent | Case No | Notation | Identifier | TWA [mg/m$^3$] | STEL [mg/m$^3$] | Source |
|---|---|---|---|---|---|---|---|
| JP | particulates not otherwise classified | | dust | OEL | 8 | | JSOH |
| JP | particulates not otherwise classified | | r | OEL | 2 | | JSOH |
| JP | dust | | less3silica, dust | OEL | 4 | | JSOH |
| JP | dust | | less3silica, r | OEL | 1 | | JSOH |

**Notation**

dust As dust less3silica Containing less than 3% cry stalline silicar Respirable fraction
STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15- minute period unless otherwise specified TWA Time-weighted average (longterm exposure limit): measured or calculated in relation to a reference period of 8 hours timeweighted average **Exposure controls**

**Individual protection measures (personal protective equipment)**

**Eye/face protection**

Use safety goggle with side protection.

**Skin protection hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

**type of material** NBR (Nitrile rubber)
**material thickness** >0,11 mm.
**breakthrough times of the glove material**
>480 minutes (permeation: level 6) **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

**Respiratory protection**

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White.

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

**Environmental exposure controls**

Keep away from drains, surface and ground water.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

**Appearance**

| | |
|---|---|
| Physical state | Solid (powder, crystalline) |
| Colour | white |
| Odour | odourless |
| Odour threshold | No data available |

**Other physical and chemical parameters**

| | |
|---|---|
| pH (value) | 6 - 6,8 (water: 10 g/l, 20 °C) |
| Melting point/freezing point | not determined |
| Initial boiling point and boiling range | This information is not available. |
| Flash point | 122 °C |
| Evaporation rate | no data available |
| Flammability (solid, gas) | Non-flammable |
| Explosive limits | |
| • lower explosion limit (LEL) | (30 g/m³) |
| • upper explosion limit (UEL) | this information is not available |
| Explosion limits of dust clouds | these information are not available |
| lower explosion limit (LEL) | 30 g/m³ |
| Vapour pressure | This information is not available. |
| Density | This information is not available. |
| Vapour density | This information is not available. |
| Bulk density | ~ 310 kg/m³ |
| Relative density | Information on this property is not available. |
| Solubility(ies) | |
| Water solubility | 62,5 g/l at 25 °C |
| Partition coefficient | |
| n-octanol/water (log KOW) | 1,78 (calculated value) |

| | |
|---|---|
| Auto-ignition temperature | Information on this property is not available. |
| Decomposition temperature | 115 °C at 1.013 hPa |
| Viscosity | not relevant (solid matter) |
| Explosive properties | none |
| Oxidising properties | none |

**Other information**

There is no additional information.

## SECTION 10 - STABILITY AND REACTIVITY

**Reactivity**

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

**Chemical stability**

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions**

Violent reaction with: Ammonia (NH3), Iodine, Strong oxidiser, Strong alkali

**Conditions to avoid**

UV-radiation/sunlight. Humidity. Decompostion takes place from temperatures above: 115 °C at 1.013 hPa.

**Incompatible materials**

There is no additional information.

**Hazardous decomposition products**

Hazardous combustion products: see section 5.

## SECTION 11 - TOXICOLOGICAL INFORMATION

**Information on toxicological effects**

**Acute toxicity**

Harmful if swallowed

| Exposure route | Endpoint | Value | Species | Source |
|---|---|---|---|---|
| oral | LD50 | 620 mg/kg | rat | --- |

**Skin corrosion/irritation**

Shall not be classified as corrosive/irritant to skin.

**Serious eye damage/eye irritation**

Shall not be classified as seriously damaging to the eye or eye irritant. **Respiratory or skin sensitisation**

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin
reaction. May cause sensitisation by skin contact. May cause sensitization by inhalation.

**Summary of evaluation of the CMR properties**

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

**Specific target organ toxicity - single exposure**

Shall not be classified as a specific target organ toxicant (single exposure).

**Specific target organ toxicity - repeated exposure**

Shall not be classified as a specific target organ toxicant (repeated exposure). **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

**Symptoms related to the physical, chemical and toxicological characteristics**

**If swallowed**

nausea, vomiting

**If in eyes**

slightly irritant **If**
**inhaled** cough

**If on skin**

Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc

**Other information**

None

## SECTION 12 - ECOLOGICAL INFORMATION

**Toxicity** acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

**Process of degradability**

Theoretical Oxygen Demand with nitrification: 2,066 mg/mg
Theoretical Oxygen Demand: 1,894 mg/mg Theoretical
Carbon Dioxide: 2,218 mg/mg

**Bioaccumulative potential**

Does not significantly accumulate in organisms.

| | |
|---|---|
| n-octanol/water (log KOW) | 1,78 |

**Mobility in soil**

Data are not available.

**Results of PBT and vPvB assessment** Data are not available.

**Other adverse effects**
Slightly hazardous to water.

## SECTION 13 - DISPOSAL CONSIDERATIONS

**Waste treatment methods**
This material and its container must be disposed of as hazardous waste. Dispose of contents/ container in accordance with local/regional/national/international regulations.

**Sewage disposal-relevant information** Do not empty into drains.

**Relevant provisions relating to waste**
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**Remarks**
Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

## SECTION 14 - TRANSPORT INFORMATION

| | |
|---|---|
| UN number | (not subject to transport regulations) |
| UN proper shipping name | not relevant |
| Transport hazard class(es) | not relevant |
| Class | - |
| Packing group | not relevant |
| Environmental hazards | none (non-environmentally hazardous acc. to the dangerous goods regulations) |

Not regulated as per IATA
**Special precautions for user** There is no additional information.
**Transport in bulk according to Annex II of MARPOL and the IBC Code** The cargo is not intended to be carried in bulk.
**Information for each of the UN Model Regulations**
**Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)** Not subject to ADR, RID and ADN.

**International Maritime Dangerous Goods Code (IMDG)** Not subject to IMDG.

## SECTION 15 - REGULATORY INFORMATION

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

**Relevant provisions of the European Union (EU)**

**Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)** Not listed.

**Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)** Not listed.

**Regulation 850/2004/EC on persistent organic pollutants (POP)** Not listed.

**Restrictions according to REACH, Annex XVII** not listed

**List of substances subject to authorisation (REACH, Annex XIV)** not listed

**Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II** not listed

**Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

not listed

**Directive 2000/60/EC establishing a framework for Community action in the field of water policy**
**(WFD)**

not listed

**National inventories**

Substance is listed in the following national inventories:
EINECS/ELINCS/NLP (Europe)

**Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16 - ADDITIONAL 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

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