

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifiers**

Product name : Benzoic acid
REACH No. : 01-2119455536-33-XXXX
CAS-No. : 65-85-0
Index-No. : CH-S0-B005

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 of the safety data sheet

Company VALERIAN LABS HOLDING CORP
Address 1130-1971 BROADWAY STREETPORT
COQUITLAM, BC V3C 0C9 CANADA
Telephone +1 (604)-710-0869
E-mail: info@valerianlabs.com

1.4 Emergency telephone

Number: 1-888-226-8832 CANUTEC (CANADA)
1-800-424-9300 CHEMTREC (USA)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****In accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**

Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Specific target organ toxicity - repeated exposure, Inhalation (Category 1), Lungs, H372
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.1 Label elements**Labelling in accordance with GHS Standards**

Pictogram



Signal Word

Danger

| | |
|--------------------------------|--|
| Hazard statement(s) | |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H372 | Causes damage to organs (Lungs) through prolonged or repeated exposure if inhaled. |
| Precautionary statement(s) | |
| P260 | Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. |
| P264 | Wash skin thoroughly after handling. |
| P280 | Wear protective gloves/ eye protection/ face protection. |
| P302 + P352 | IF ON SKIN: Wash with plenty of water. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P314 | Get medical advice/ attention if you feel unwell. |
| Supplemental Hazard Statements | none |

Reduced Labeling (<= 125 ml)

Pictogram



Signal Word Danger

| | |
|---------------------|--|
| Hazard statement(s) | |
| H318 | Causes serious eye damage. |
| H372 | Causes damage to organs through prolonged or repeated exposure if inhaled. |

| | |
|----------------------------|--|
| Precautionary statement(s) | |
| P260 | Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. |
| P264 | Wash skin thoroughly after handling. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P314 | Get medical advice/ attention if you feel unwell. |

Supplemental Hazard Statements none

2.2 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.

SECTION 3: Composition/information on ingredients

3.1 Substances

| | |
|------------------|--|
| Formula | : C ₇ H ₆ O ₂ |
| Molecular weight | : 122,12 g/mol |
| CAS-No. | : 65-85-0 |
| EC-No. | : 200-618-2 |





Safety Data Sheet

Version: 1.2

Revision date: SEPT-01-2023

Retrieve on: SEPT-10-2023

| Component | Classification | Concentration |
|-------------------------------------|--|---------------|
| Benzoic acid | | |
| CAS-No. 65-85-0 EC-No. 200-618-2 | Skin Irrit. 2; Eye Dam. 1; STOT RE 1; H315, H318, H372 | <= 100 % |

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.

In case of eye contact

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

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 Carbon 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.

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.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. 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. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

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

Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

| Application Area | Routes of exposure | Health effect | Value |
|------------------|--------------------|----------------------------|-----------------------|
| Workers | Inhalation | Long-term local effects | 0,1 mg/m ³ |
| Workers | Inhalation | Long-term systemic effects | 3 mg/m ³ |
| Workers | Skin contact | Long-term systemic effects | 62,5mg/kg BW/d |



Predicted No Effect Concentration (PNEC)

| Compartment | Value |
|------------------------------|-------------|
| Soil | 0,151 mg/kg |
| Sea water | 0,034 mg/l |
| Sea sediment | 0,175 mg/kg |
| Fresh water sediment | 1,75 mg/kg |
| Sewage treatment plant | 100 mg/l |
| Aquatic intermittent release | 0,331 mg/l |

8.2 Exposure controls

Personal protective equipment

Eye/Face Protection:

- Select eye protection equipment that has been tested and approved in accordance with the relevant government standards, such as NIOSH (US) or EN 166 (EU). Utilize tightly fitting safety goggles.

Skin Protection:

- When handling, wear gloves that are inspected before use.
- Employ the correct glove removal technique (avoiding contact with the outer surface of the gloves) to prevent skin contact with this product. Dispose of contaminated gloves in accordance with applicable laws and good laboratory practices. Thoroughly wash and dry your hands.
- If this product is used in a solution, mixed with other substances, or under conditions that differ from EN 374, please contact the supplier of EC approved gloves.
- This recommendation serves as advisory guidance and should be evaluated by an industrial hygienist and safety officer who are familiar with the specific usage circumstances of our customers. It should not be interpreted as providing approval for any particular use scenario.

Body Protection:

- Wear acid-resistant protective clothing.

Respiratory Protection:

- In situations where the risk assessment indicates that air-purifying respirators are appropriate, utilize 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. Employ respirators and components that have been tested and approved in accordance with the relevant government standards, such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure:

- Prevent the product from entering drains.



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---|--|
| a) Physical state | crystalline |
| b) Color | white |
| c) Odor | No data available |
| d) Melting point/freezing point | Melting point/range: 121 - 125 °C - lit. 249 °C - lit. |
| e) Initial boiling point and boiling range | No data available No data available |
| f) Flammability (solid, gas) | |
| g) Upper/lower flammability or explosive limits | |
| h) Flash point | No data available |
| i) Autoignition temperature | No data available No data available |
| j) Decomposition temperature | |
| k) pH | 2,8 at 25 °C |
| l) Viscosity | Viscosity, kinematic: No data available Viscosity, dynamic: No data available |
| m) Water solubility | No data available |
| n) Partition coefficient: n octanol/water | log Pow: 1,88 - Bioaccumulation is not expected. |
| - | |
| o) Vapor pressure | No data available |
| p) Density | 1,26 g/cm ³ at 15 °C |
| Relative density | No data available |
| q) Relative vapor density | No data available |
| r) Particle characteristics | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | none |

9.2 Other safety information

- | | |
|------------------------|---|
| Surface tension | 67,5 mN/m at 1g/l at 20 °C - OECD Test Guideline 115 |
| Relative vapor density | 4,22 - (Air = 1.0) |





SECTION 10: Stability and reactivity

10.1 Reactivity

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

Risk of ignition or formation of inflammable gases or vapours with:

Fluorine

Exothermic reaction with:
bases

Strong oxidizing agents

Strong bases

nitrites

strong reducing agents

10.4 Conditions to avoid

no information available

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

Acute toxicity

LD50 Oral - Mouse - male and female - 2.250 mg/kg

(OECD Test Guideline 401)

Symptoms: Nausea, Vomiting, Irritation of mucous membranes

LC50 Inhalation - Rat - male and female - 4 h - > 12,2 mg/l - dust/mist

Remarks: (ECHA)

Symptoms: Cough, Possible damages:, mucosal irritations

LD50 Dermal - Rabbit - male and female - > 2.000 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

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

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive - 21 Days

(Directive 67/548/EEC, Annex V, B.5.)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)





Safety Data Sheet

Version: 1.2

Revision date: SEPT-01-2023

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Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

Remarks: (ECHA)

Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster fibroblasts

Metabolic activation: without metabolic activation

Result: Positive results were obtained in some in vitro tests.

Remarks: (ECHA)

Test Type: Micronucleus test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 487

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Inhalation - Causes damage to organs through prolonged or repeated exposure.

- Lungs

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

Aspiration hazard

No data available

11.2 Additional Information

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.

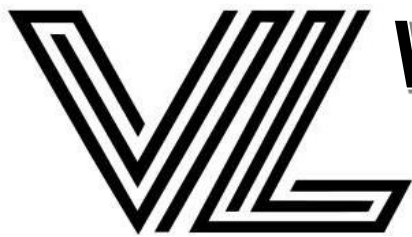
Repeated dose toxicity - Rat - male and female - inhalation (dust/mist/fume) - 28 Days

Repeated dose toxicity - Rabbit - male and female - Dermal - 21 Days - NOAEL (No observed adverse effect level) - > 2.500 mg/kg

RTECS: DG0875000

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





Safety Data Sheet

Version: 1.2

Revision date: SEPT-01-2023

Retrieve on: SEPT-10-2023

SECTION 12: Ecological information

12.1 Toxicity

| | |
|---|--|
| Toxicity to fish | static test LC50 - Lepomis macrochirus - 44,6 mg/l - 96 h (US-EPA) |
| Toxicity to daphnia and other aquatic invertebrates | static test LC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (US-EPA) |
| Toxicity to algae | static test ErC50 - Pseudokirchneriella subcapitata - > 33,1 mg/l - 72 h (OECD Test Guideline 201) |
| Toxicity to bacteria | static test IC50 - activated sludge - > 1.000 mg/l - 3 h (OECD Test Guideline 209) microtox test EC50 - Photobacterium phosphoreum - 17 mg/l - 30 min Remarks: (Lit.) |
| Toxicity to fish(Chronic toxicity) | semi-static test EC50 - Oncorhynchus mykiss (rainbow trout) - > 120 mg/l - 28 d (OECD Test Guideline 204) |
| Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) | semi-static test EC50 - Daphnia magna (Water flea) - > 25 mg/l - 21 d (OECD Test Guideline 211) |

12.2 Persistence and degradability

| | |
|------------------|---|
| Biodegradability | anaerobic - Exposure time 35 d Result: 89,5 % - Biodegradable (OECD Test Guideline 311) |
|------------------|---|

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





Safety Data Sheet

Version: 1.2

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3. AIIC - Australian Inventory of Industrial Chemicals
4. ASTM - American Society for the Testing of Materials
5. bw - Body weight
6. CMR - Carcinogen, Mutagen, or Reproductive Toxicant
7. DIN - Standard of the German Institute for Standardization
8. DSL - Domestic Substances List (Canada)
9. ECx - Concentration associated with x% response
10. ELx - Loading rate associated with x% response
11. EmS - Emergency Schedule
12. ENCS - Existing and New Chemical Substances (Japan)
13. ErCx - Concentration associated with x% growth rate response
14. GHS - Globally Harmonized System
15. GLP - Good Laboratory Practice
16. IARC - International Agency for Research on Cancer
17. IATA - International Air Transport Association
18. IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
19. IC50 - Half maximal inhibitory concentration
20. ICAO - International Civil Aviation Organization
21. IECSC - Inventory of Existing Chemical Substances in China
22. IMDG - International Maritime Dangerous Goods
23. IMO - International Maritime Organization
24. ISHL - Industrial Safety and Health Law (Japan)
25. ISO - International Organization for Standardization
26. KECI - Korea Existing Chemicals Inventory
27. LC50 - Lethal Concentration to 50% of a test population
28. LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
29. MARPOL - International Convention for the Prevention of Pollution from Ships
30. n.o.s. - Not Otherwise Specified
31. NO(A)EC - No Observed (Adverse) Effect Concentration
32. NO(A)EL - No Observed (Adverse) Effect Level
33. NOELR - No Observable Effect Loading Rate
34. NZIoC - New Zealand Inventory of Chemicals
35. OECD - Organization for Economic Co-operation and Development
36. OPPTS - Office of Chemical Safety and Pollution Prevention
37. PBT - Persistent, Bio accumulative, and Toxic substance
38. PICCS - Philippines Inventory of Chemicals and Chemical Substances
39. (Q)SAR - (Quantitative) Structure Activity Relationship

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- 40. REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals
- 41. RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
- 42. SADT - Self-Accelerating Decomposition Temperature
- 43. SDS - Safety Data Sheet
- 44. TCSI - Taiwan Chemical Substance Inventory
- 45. TECI - Thailand Existing Chemicals Inventory
- 46. TSCA - Toxic Substances Control Act (United States)
- 47. UN - United Nations
- 48. UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods
- 49. vPvB - Very Persistent and Very Bio accumulative

Additional information

The provided information is considered accurate but is not intended to cover every aspect and should be regarded as a general reference. The content in this document is derived from our current understanding and is relevant to the product concerning the necessary safety measures.