

Safety Data Sheet

Version: 1.2
Revision date: SEPT-01-2023
Retrieve on: SEPT-10-2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Aniline

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. : 62-53-3

Index-No. : CH-L6-A015

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)

Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 3), H311
Serious eye damage (Category 1), H318
Skin sensitization (Category 1), H317



Germ cell mutagenicity (Category 2), H341
 Carcinogenicity (Category 2), H351
 Specific target organ toxicity - repeated exposure (Category 1), Blood, H372
 Short-term (acute) aquatic hazard (Category 1), H400
 Long-term (chronic) aquatic hazard (Category 1), H410

2.2 Label elements

Labelling in accordance with GHS Standards

Pictogram



Signal Word

Danger

Hazard statement(s)

H301 + H311 + H331

Toxic if swallowed, in contact with skin or if inhaled.

H317

May cause an allergic skin reaction.

H318

Causes serious eye damage.

H341

Suspected of causing genetic defects.

H351

Suspected of causing cancer.

H372

Causes damage to organs (Blood) through prolonged or repeated exposure.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273

Avoid release to the environment.

P280

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

P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P302 + P352 + P312

IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.

P304 + P340 + P311

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

P305 + P351 + P338

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

Supplemental Hazard Statements

none

Reduced Labeling (<= 125 ml)

Pictogram



Signal Word

Danger

Hazard statement(s)

H317

May cause an allergic skin reaction.

H341

Suspected of causing genetic defects.

H351

Suspected of causing cancer.

H372

Causes damage to organs through prolonged or repeated exposure.

H318

Causes serious eye damage.





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H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled.
Precautionary statement(s) P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302 + P352 + P312	IF ON SKIN: Wash with plenty of water.Call a POISON CENTER/ doctor if you feel unwell.
P304 + P340 + P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

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.

Rapidly absorbed through skin.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula	: C ₆ H ₇ N
Molecular weight	: 93,13 g/mol
CAS-No.	: 62-53-3
EC-No.	: 200-539-3
Index-No.	: CH-L6-A015

Component	Classification	Concentration
Aniline		
CAS-No.	62-53-3	<= 100 %
EC-No.	200-539-3	
Acute Tox. 3; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H331, H311, H318, H317, H341, H351, H372, H400, H410		





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	Concentration limits: >= 1 %: STOT RE 1, H372; 0,2 - < 1 %: STOT RE 2, H373; M-Factor - Aquatic Acute: 1 - Aquatic Chronic: 1	
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SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

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

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

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

Nitrogen oxides (NO_x)

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

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. 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: Do not breathe vapors, aerosols.
- Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.
- 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 carefully with liquid-absorbent material.
- Dispose of properly. Clean up affected area.

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. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

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





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Handle under inert gas. Protect from moisture. Light sensitive.

Storage class

Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

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
Worker DMEL, acute	inhalation	Systemic effects	15,4 mg/m ³
Worker DMEL, acute	dermal	Systemic effects	
Worker DMEL, longterm	inhalation	Systemic effects	7,7 mg/m ³
Worker DMEL, longterm	dermal	Systemic effects	

Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	0,0012 mg/l
Sea water	0,00012 mg/l
Fresh water sediment	0,153 mg/kg
Sea sediment	0,153 mg/kg
Sewage treatment plant	2 mg/l
Soil	0,033 mg/kg

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

Body Protection

protective clothing

Respiratory protection

Recommended Filter type: Filter A-(P3)

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 | liquid |
| b) Color | No data available |
| c) Odor | No data available |
| d) Melting point/freezing point | Melting point/range: -6 °C - lit. |
| e) Initial boiling point and boiling range | 184 °C - lit. |
| f) Flammability (solid, gas) | No data available |
| g) Upper/lower flammability or explosive limits | Upper explosion limit: 23 %(V)
Lower explosion limit: 1,3 %(V) |
| h) Flash point | 70 °C - closed cup |
| i) Autoignition temperature | No data available |
| j) Decomposition temperature | 190 °C |
| k) pH | 8,8 at 36 g/l at 20 °C |
| l) Viscosity | Viscosity, kinematic: No data available
Viscosity, dynamic: 4,4 mPa.s at 20 °C |
| m) Water solubility | soluble |
| n) Partition coefficient: n octanol/water | log Pow: 0,91 - Bioaccumulation is not expected. |
| o) Vapor pressure | 0,49 hPa at 20 °C |
| p) Density | 1,022 g/cm ³ at 25 °C - lit. |
| Relative density | No data available |
| q) Relative vapor density | No data available |
| r) Particle characteristics | No data available |

9.2 Other safety information

- | | |
|------------------------|---------------------|
| Surface tension | 42,12 mN/m at 25 °C |
| Relative vapor density | 3,22 - (Air = 1.0) |





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.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Risk of explosion with:

Oxidizing agents
peroxi compounds
perchlorates
perchloric acid
Nitric acid
Oxygen
organic nitro compounds
benzene/benzene derivatives

nitrates

Exothermic reaction with:

semimetallic halides
Acetic anhydride
acids

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

Fluorine
Alkaline earth metals
Alkali metals

10.4 Conditions to avoid

Avoid moisture.
Strong heating.

10.5 Incompatible materials

Strong oxidizing agents

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 - Rat - 250 mg/kg

Remarks: (RTECS)

LC50 Inhalation - Rat - 4 h - 3,3 mg/l - vapor

Remarks: (Lit.)

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

LC50 Inhalation - Rat - 4 h - 3,3 mg/l - vapor

Remarks: (Lit.)

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

LD50 Dermal - Rabbit - 840 mg/kg

Remarks: (Lit.)





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Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

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

Respiratory or skin sensitization

May cause allergic skin reaction. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Germ cell mutagenicity

Suspected of causing genetic defects.

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: positive

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: positive

Test Type: unscheduled DNA synthesis assay

Test system: rat hepatocytes

Metabolic activation: without metabolic activation

Result: negative

Remarks: (ECHA)

Test Type: Micronucleus test

Species: Rat

Cell type: Bone marrow

Application Route: Oral

Method: OECD Test Guideline 474

Result: positive

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Intraperitoneal

Method: OECD Test Guideline 475

Result: positive

Test Type: Chromosome aberration test

Species: Rat

Cell type: Bone marrow

Application Route: Oral

Method: OECD Test Guideline 475

Result: positive

Test Type: dominant lethal test

Species: Rat





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Application Route: Intraperitoneal
Method: OECD Test Guideline 478
Result: negative

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

- Blood

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.

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Cyanosis, Headache, Vomiting, Nausea, Incoordination., fatigue, Dizziness, Drowsiness, Confusion., Weakness, Unconsciousness, Symptoms may be delayed.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 10,6 mg/l - 96,0 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	semi static test EC50 Daphnia magna (Water flea) 0,16 mg/l 48 h (US-EPA)
Toxicity to algae	static test ErC50 - Chlorella pyrenoidosa - 175 mg/l - 72 h (OECD Test Guideline 201)
- Toxicity to bacteria	EC50 - activated sludge - 2.500 mg/l - 10 min Remarks: (Lit.)





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Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) flow-through test NOEC - Daphnia magna (Water flea) - 0,01 mg/l - 21 d (US-EPA)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 30 d
Result: ca.90 % - Readily biodegradable.
(OECD Test Guideline 301D)

12.3 Bioaccumulative potential

Bioaccumulation Danio rerio (zebra fish) - < 0,1 mg/l(Aniline)

Bioconcentration factor (BCF): 2,6

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

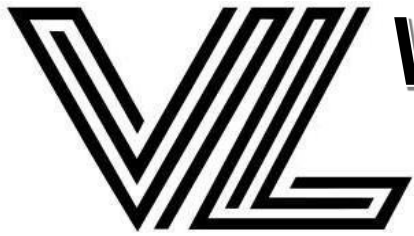
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available



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

ADR/RID: 1547

IMDG: 1547

IATA: 1547

14.2 UN proper shipping name

ADR/RID: ANILINE

IMDG: ANILINE

IATA: Aniline

14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

14.6 Special precautions for user

Tunnel restriction code : (D/E)

Further information : No data available

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Aniline

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. H2 ACUTE TOXIC

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

A Chemical Safety Assessment has been carried out for this substance.





SECTION 16: Other information

Full text of other abbreviations

These are abbreviations and acronyms commonly used in the field of chemical safety, regulation, and transportation:

1. ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
2. ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
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





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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
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.

