

Sulphanilic Acid

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Chemical name:	Sulphanilic Acid
EC number:	204-482-5
CAS No.	121-57-3
Index No:	612-014-00-x
Registration number:	01-2119541820-45-0001
Chemical characterization:	Organic mono-constituent substance

1.2 Relevant identified uses of the substance and uses advised against

Industrial use resulting in the manufacture of other substances (use of intermediates), products such as pH regulators, flocculants, precipitants, neutralisation agents, laboratory chemicals, additives in processes and products (not becoming part of the articles), manufacture of speciality chemicals and formulation of preparations and/or re-packaging (excluding alloys).

Relevant Identified Uses (see corresponding Exposure Scenario annexed to this SDS)	Manufacture of other substances - Exposure Scenario 1 (Annex 1) Manufacture of fine chemicals - Exposure Scenario 2 (Annex 2) Formulation of preparations - Exposure Scenario 3 (Annex 3)
Uses advised against	None

1.3 Details of the supplier of the safety data sheet

Company:	BONDALTI CHEMICALS, SA Rua do Amoníaco Português, nº 10 Quinta da Indústria, Beduído 3860-680 Estarreja - Portugal
Telephone:	+351 234 810 300
Fax:	+351 234 810 361
E-mail:	bondalti@bondalti.com
Web page:	www.bondalti.com
Contact:	Maria José Alves
E-mail:	fds@bondalti.com

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1.4 Emergency telephone number

BONDALTI CHEMICALS, SA	
Telephone:	+351 234 810 300 (24 hours/day - 7 days/week)
Fax:	+351 234 810 361
Portuguese emergency number	112
SOS – Poisons Centre	In England and Wales: NHS 111 - dial 111 In Scotland: NHS 24 - dial 111 In North Ireland: Contact local GP or pharmacist during normal hours; In Republic of Ireland: 01 809 2166 Unite States of America: 1-800-222-1222

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance

Classification (REGULATION (EC) No. 1272/2008)

<u>Classification</u>	<u>Hazard category</u>	<u>Hazard Statements</u>
Eye irritation	Eye Irrit. 2	H315: Causes skin irritation
Skin Sensitivity	Skin Sens. 1	H317: May cause an allergic skin reaction.
Skin irritation	Skin Irrit. 2	H319: Causes serious eye irritation

Additional information

Not applicable.

2.2 Label elements

Labelling (REGULATION (EC) No. 1272/2008)

Hazard pictogram:



GHS07: exclamation mark

Signal word:

Warning

Hazard Statements:

H315: Causes skin irritation

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation

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Precautionary statements:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P264: Wash ... thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P362: Take off contaminated clothing..

2.3 Other hazards

Not available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Hazardous substances

Chemical name	CAS No.	EC No.	REACH No.	Concentration [%]
Sulphanilic Acid	121-57-3	204-482-5	01-2119541820-45-0001	≥99.7%(w/w)

3.2 Mixtures

Not applicable.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Remove the victims from the danger area without endangering yourself. Remove/take off immediately all contaminated or impregnated clothing (including clothes and footwear)
If inhaled	Remove the victim into the fresh air. If victim stops breathing or breathing is difficult administer oxygen and call a doctor.
In case of skin contact	Wash skin immediately with plenty of soap and water while removing contaminated clothes and shoes. Wash contaminated clothing before wearing again.
In case of eye contact	Wash eyes immediately with plenty of clean water keeping them open for at least 15 minutes. Remove contact lenses, if present. Assure adequate flushing of eyes by separating eyelids with fingers. Obtain medical assistance as a precaution.
If swallowed	Do not induce vomiting. If victim is conscious, give them two glasses of water to dilute the product. Immediately call for medical attention. Never administer anything orally to an unconscious person or anyone with convulsions.

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First aider protection

Respiratory protection:	Use masks with type E filter
Hand protection:	Use suitable gloves tested by EN 374 Suitable material: PVC or rubber
Eye protection:	Use chemical resistant goggles

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects, allergic reactions, dizziness, nausea and vomiting.

4.2.1 Inhalation

May cause respiratory irritation.

4.2.2 Skin contact

Irritation of the skin and redness.

4.2.3. Eye contact

Redness and pain.

4.2.4. Ingestion

Not applicable.

4.3 Indication of any immediate medical attention and special treatment needed

No data.

SECTION 5. FIREFIGHTING MEASURES**5.1 Extinguishing media**

Suitable extinguishing media:	Use water spray, carbon dioxide, dry chemical powder or appropriate foam.
Unsuitable extinguishing media:	Not applicable

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5.2 Special hazards arising from the substance

Sulphanilic Acid may produce dust clouds inflammable in the air.

Take precautionary measures against static discharges.

If involved in fire, may release harmful and toxic fumes.

Releases toxic fumes of carbon monoxide, carbon dioxide and sulphur and nitrogen oxides under fire conditions.

5.3 Advice for firefighters

In the event of fire, use self-contained breathing apparatus and suitable protective clothing to avoid skin and eye contact.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Assure adequate personal protection (including respiratory protection) during the removal of spills.

6.1.1. For staff not involved in the emergency response

Move people to safety area.

6.1.2. For staff responsible for the emergency response

Wear suitable personal protective equipment (e.g.: chemical protective suit; goggles; protective footwear and gloves)

Avoid breathing dust.

Avoid skin or eye contact and inhalation.

6.2 Environmental precautions

Do not release into the environment.

Do not flush into surface water or into sanitary sewer system.

If the product contaminates rivers, lakes or sewers, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up

Protect yourself against dust clouds.

Avoid dust formation.

Collect spills, transferring them to a recipient for elimination.

After product removal, wash the spillage area to keep it clean.

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It can be neutralised using a weak base such as sodium bicarbonate.

6.4 Reference to other sections

Not applicable.

SECTION 7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Control dust formation.
Avoid contact with skin and eyes.
Avoid inhaling high concentrations of dust.
Take precautionary measures against static discharges.

7.2 Conditions for safe storage, including any incompatibilities

Store in well-ventilated places.
Keep recipients well sealed and dry.
Do not store with acids

7.3 Specific end use(s)

See exposure scenarios in annexes 1, 2 and 3.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

There are no occupational exposure limit values for this product.
Avoid dust dispersion.

Components	CAS No.	Value	Control parameters	Legal basis
Sulphanilic Acid or dust(*)	121-57-3	10 mg/m ³ , 8h	OEL – total dust	ACGIH 2017
		3 mg/m ³ , 8h	OEL – inhalable dust	

(*) Form of exposure: Inhalation of dust, aerosols, mist and gas

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8.1.2 DNEL/PNEC values

DNEL Values	
Long-term systemic effects on the skin	3.33 mg/kg db/day
Long-term systemic effects through inhalation	13.33 mg/m ³
PNEC value(s)	
PNEC _{water} (freshwater):	0.023 mg/L; Assessment Factor 1000;
PNEC _{water} (seawater):	0.0023 mg/L; Assessment Factor 1000;
PNEC _{water} (intermittent release):	0.23 mg/L; Assessment Factor 100;
PNEC _{STP} : 100 mg/L	100 mg/L; Assessment Factor 10

8.2 Exposure controls

8.2.1 Appropriate technical controls

Ensure adequate ventilation.

8.2.2 Individual protection measures, such as personal protective equipment

Respiratory protection:	Use dust mask with particle filter type B-(P2)
Hand protection:	Use waterproof chemical gloves in accordance with EN 374
Eye protection:	Chemically-resistant safety goggles must be worn
Body and skin protection:	Wear adequate protective clothing
Hygiene measures:	Handle according to good health and safety practices. Do not eat, drink or smoke when using the product. Wash hands before breaks and at the end of the work day.
Protective measures:	Appropriate protective equipment must always be used when working with this product.

8.2.3 Environmental exposure controls

Discard rinse water in compliance with applicable regulations:

- Commission Decision 2014/955/EU - list of waste
- DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives
- Commission Regulation (EU) No 1357/2014 of 18 December 2014 - replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties

a) Appearance:	Organic powder
b) Odour:	No characteristic odour
c) Odour threshold:	Not applicable
d) pH:	No data (*)
e) Melting point/freezing point:	The substance decomposes before melting.
f) Initial boiling point and boiling range:	The substance decomposes before boiling.
g) Flash point:	No data (*)
h) Evaporation rate:	No data (*)
i) Flammability (solid, gas):	The substance did not catch fire in the space of two minutes and is therefore not considered highly flammable
j) Upper/lower limits of flammability or explosivity:	No data (*)
k) Vapour pressure:	Less than 10 Pa (at room temperature)
l) Vapour density:	No data (*)
m) Relative density:	1.4862 at 20°C
n) Solubility(ies):	12.51 g/L to 20 °C (highly water-soluble)
o) Partition coefficient n-octanol/water:	Log Kow (Pow): - 2.3 to 25 °C. Highly hydrophilic
p) Auto-ignition temperature:	331 °C at 1013 hPa
q) Decomposition temperature:	No data (*)
r) Viscosity:	No data (*)
s) Explosive properties:	Non-explosive
t) Flammable Properties:	Non-oxidising

(*) No reliable data source for this data

9.2 Other information

Dissociation constant:	pKA at 20°C: 3.35
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SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

May react with acids.

10.2 Chemical stability

Stable in normal storage and handling conditions.

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10.3 Possibility of hazardous reactions

May react with acids.

10.4 Conditions to avoid

Avoid contact with acids.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

Decomposition of hazardous products may occur in the event of fire (thermal decomposition approximately 260°C)

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

As the substance is practically non-toxic, it does not need to be classified for acute toxic effects.

As sulphanilic acid is excreted very quickly, mainly through urine, it does not have bioaccumulative potential.

Apart from that, it is most likely that sulphanilic acid only penetrates skin very slightly, due to its highly polar nature and a very low Pow log. Consequently, absorption through the skin will be low.

Sulphanilic Acid may cause an allergic reaction in contact with skin. Sulphanilic Acid is an eye irritant.

<i>Hazard Class</i>	<i>Dose descriptor</i>	<i>Method/reference</i>
Acute oral toxicity:	LD50: 2000 mg/kg db (female mouse) test material: sulphanilic acid	OECD Guideline 423 (Acute Oral Toxicity – Method Class Acute Toxic)
Acute dermal toxicity:	LD ₅₀ : >2000 mg/kg db (male/female mouse) test material: sulphanilic acid	OECD Guideline 402 (Acute dermal toxicity)
Acute inhalation toxicity:	Due to very low vapour pressure, exposure through inhalation is highly unlikely. No acute inhalation study is therefore necessary.	
Skin irritation:	Non-irritant	OECD directive for the Testing of Chemical Products, Proposal Project for a New Directive, Skin Irritation in Vitro: Reconstructed Human Epidermis (RHE) Test Method, Version 7.6, 09.09.09
Skin corrosion	As the substance is a non-skin irritant, it is also non-skin corrosive.	

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Skin sensitisation	Non-sensitiser;	OECD Guideline 429 (Skin sensitisation: Local Lymph Node Assay)
Germ cell mutagenicity in vitro: in vivo:	Negative; <i>S. typhimurium</i> (test mat.: sulphanilic acid) Doses: 1 - 1000 µg/plate Negative; house and wood mouse; test mat.: sulphanilic acid	Equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Test) C. Westmoreland and D.G. Gatehouse (1991)
Carcinogenicity:	Non-carcinogenic;	Borzelleca wood/house mouse
Oral reproductive toxicity Fertility:	NOAEL: 1000 mg/kg db/day (real dose received) (male/female mouse) test mat: sulphanilic acid	OECD Guideline 421 (Reproduction/Developmental Toxicity Screening Test)
Teratogenicity/development	NOAEL (developmental toxicity): 1000 mg/kg db/day; (mouse) test mat.: sulphanilic acid NOAEL (maternal toxicity): 1000 mg/kg db/day (mouse) test mat.: sulphanilic acid	
Hazard Class	Dose descriptor	Method/reference
STOT- single exposure	No data	
STOT- repeated exposure	No data	
Aspiration toxicity:	No data	

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Information on environmental effects

Hazard Class/species	Dose descriptor	Method/reference
Toxicity to fish,	LC50 (96 h) <i>Danio rerio</i> (tropical fish): > 100 mg/L Test mat.: Sulphanilic acid;	OECD Guideline 203 (Fish Acute Toxicity Test)
Toxicity to daphnia and other aquatic invertebrates:	EC50 (48 h) <i>Daphnia magna</i> (microcrustacean): 23 mg/L (mobility) Test mat.: sulphanilic acid;	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Toxicity in algae: <i>Desmodesmus subspicatus</i>	EC ₅₀ (72 h): 32 mg/L test mat. sulphanilic acid; based on: number of cells (production) NOEC (72 h): 4.6 mg/L	(OECD Guideline 201 (Alga, Growth Inhibition Test)

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	Test mat. sulphanilic acid; based on: number of cells (production)	
Toxicity in plants:	No data	

12.1 Persistence and degradability

Biodegradability:

Biodegradation in water: readily biodegradable

Degradation (abiotic):

As the substance is readily biodegradable, it will not persist in the environment.

12.3 Bioaccumulative potential

As the substance has a very low log Kow, i. e. < 3, and it is biodegradable, it can be assumed that it does not bioaccumulate.

12.4 Mobility in soil

Not applicable.

12.5 Results of PBT and vPvB assessment

Since it is readily biodegradable and has a very low log Kow, the substance will neither persist nor bioaccumulate in the environment, and is considered neither PBT nor vPvB.

12.6 Other adverse effects

Not applicable.

SECTION 13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Waste disposal procedures:**

Sulphanilic acid waste can be neutralised with water and caustic soda or removed if it is in a solid state.

- EWC code 06 01 06* - Other acids

Packaging treatment:

- Recycling of packaging is preferable to elimination.

- Do not wash recipients or the water used for washing will have to be considered hazardous waste.

- EWC Code 15 01 10(*) - Packaging containing residues of or contaminated by hazardous substances.

Sulphanilic Acid**Applicable regulations:**

- Commision Decision 2014/955/EU - list of waste
- DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives
- Commision Regulation (EU) No 1357/2014 of 18 December 2014 - replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives

SECTION 14. TRANSPORT INFORMATION

This substance is not classified as hazardous in terms of transport.

SECTION 15: REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance**

This safety sheet was made taking into consideration the following legislation:

- Regulation (EC) No.1907/2006 of the European Parliament and of the Council of 18 December, concerning the registration, evaluation, authorisation and restriction of chemicals (REACH), and respective amendments;
- Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste;
- Commision Regulation (EU) No 1357/2014 of 18 December 2014 - replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives
- Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC
- Commision Decision 2014/955/EU - list of waste
- Directive 2008/68/EC of the European Parliament and of the Council of 24 September, on the inland transport of dangerous goods

15.2 Chemical safety assessment

A chemical safety study was made.

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SECTION 16. OTHER INFORMATION

This information refers only to the aforementioned product and is not valid if used with any other product or process. This information is, to the best of our knowledge, correct and complete and is provided in good faith, but without guarantee; it is the users' responsibility to ensure that the information is complete and appropriate for their specific use of the product.

List of Changes:

DATE	REVISION	CHANGES MADE
21-12-2017	10	Word "SECTION" added to all section titles
		Section 1.3 and 1.4
		Section 2 – Classification and labelling relative to directive 67/548/EEC or 1999/45/EC eliminated
		Section 2.1; 2.2 and 2.3
		Section 3.2
		Section 4
		Section 5
		Section 6
		Section 8
		Section 9.1
		Section 10.6
		Section 13
		Section 14
		Section 16
15-06-2018	11	Section 1.3 and 1.4

Abbreviations mentioned on the Sheet:

CAS – "World's authority for chemical information"

EC – European Community

DNEL – "Derived No-Effect Level"

EC₅₀ – Half of maximum effective concentration

SDS – Safety Data Sheet

LC50 – Median Lethal Concentration

mPmB(vPvB) - Very persistent and very bioaccumulative.

PBT – Persistent, bioaccumulative and toxic substance.

PC - Product Category

PNEC – "Predicted No-Effect Concentration"

PROC - Process Category

Eye Irrit. 2 - Eye irritation, category 2

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Skin Sens. 1 - Skin Sensitivity, category 1
Skin Irrit. 2 - Skin irritation, category 2
OELS - Occupational exposure limit values

References:

Chemical Safety Report Sulphanilic Acid- 2010-10-29 - CSR-PI-5.2.1

ANNEXES

Annex 1: Exposure Scenario 1 - Manufacture
Annex 2: Exposure Scenario 2 - Manufacture of fine chemicals
Annex 3: Exposure Scenario 3 - Formulation

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Annex 1: Exposure Scenario 1 – Manufacture

Scenario M1: Manufacture	Process	Environment	Form	Dust cloud risk	Duration	Ventilation	Respiratory protection	Other RMM
Manufacture: Use in closed process, without likelihood of exposure (Proc 1)	1- Use in closed process, without likelihood of exposure	Industrial	Solid	High	> 4 hours (standard)	Inside without LEV	No	No
Manufacture: Use in closed continuous process with occasional controlled exposure (Proc 2)	2 - Use in closed continuous process with occasional controlled exposure	Industrial	Solid	High	> 4 hours (standard)	Inside without LEV	No	No
Manufacture: Use in closed batch process (synthesis or formulation) (Proc 3)	3 - Use in closed batch process (synthesis or formulation)	Industrial	Solid	High	> 4 hours (standard)	Inside without LEV	No	No
Manufacture: Use in batch or other process (synthesis) where opportunity for exposure arises (Proc 4)	4 - Use in batch or other process (synthesis) where opportunity for exposure arises	Industrial	Solid	High	> 4 hours (standard)	Inside without LEV	90%	Gloves: 80% effective
Manufacture: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	Industrial	Solid	High	1- 4 hours	Inside without LEV	90%	Gloves: 80% effective
Manufacture: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	Industrial	Solid	High	> 4 hours (standard)	Inside without LEV	90%	Gloves: 80% effective

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Annex 2: Exposure Scenario 2 – Manufacture of fine chemicals

Scenario M1: Manufacture of fine chemicals	Process	Environment	Form	Dust cloud risk	Duration	Ventilation	Respiratory protection	Other RMM
Manufacture of speciality chemicals: use in closed process, without probability of exposure (Proc 3)	3 – Use in closed batch process (synthesis or formulation)	Industrial	Solid	High	> 4 hours (standard)	Inside without LEV	No	No
Manufacture of speciality chemicals: use in closed process, without probability of exposure (Proc 4)	4 – Use in batch and other process (synthesis) where opportunity for exposure arises	Industrial	Solid	High	> 4 hours (standard)	Inside without LEV	No	No
Manufacture of speciality chemicals: use in closed process, without probability of exposure (Proc 15)	15 – Use of laboratory reagents in small scale laboratories	Industrial	Solid	High	> 4 hours (standard)	Inside without LEV	No	No

Annex 3: Exposure Scenario 3 – Formulation

Scenario M1: Manufacture of fine chemicals	Process	Environment	Form	Dust cloud risk	Duration	Ventilation	Respiratory protection	Other RMM
Formulation: Use in batch and other process (synthesis) where opportunity for exposure arises	4-Use in batch and other process (synthesis) where opportunity for exposure arises	Industrial	Solid	High	> 4 hours (standard)	Inside without LEV	90%	Gloves: 80% effective