

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

1.1 Product identifier

Product name

ASORBIO® ZAP

Name: Zeolite, cuboidal, crystalline, synthetic, non-fibrous (CAS: 1318-02-1, EC: 930-915-9)**REACH Registration number:** 01-2119429034-49

<https://my.chemius.net/p/xx5xWj/en/pd/en>

Synonyms

ASORBIO® | ASORBIO® ZAP-3A, ASORBIO® ZAP-3A-LC, ASORBIO® ZAP-3A-HR,
ASORBIO® ZAP-4A, ASORBIO® ZAP-5A, ASORBIO® ZAP-13X, ASORBIO® ZAP-PU,
ASORBIO® ZAP-PU-S

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Industrial use.

Uses advised against

No specific uses advised against are identified.

1.3 Details of the supplier of the safety data sheet

Manufacturer

SILKEM, d. o. o.
Tovarniška cesta 10
2325 Kidričevo, Slovenia
+386 2 7991 200
info@silkem.si

1.4 Emergency Telephone Number

Emergency

112

Manufacturer

+386 2 7991 208 (7h - 15h)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

According to the regulation, the chemical is not classified as hazardous.

2.2 Label elements

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

Not applicable.

Supplemental hazard information (EU):

Not applicable.

Precautionary statements:

Not applicable.

2.3 Other hazards**PBT/vPvB**

No information.

Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

Additional information

The substances in the product are not classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Name	CAS EC Index REACH	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits	Notes for substances
Zeolite, cuboidal, crystalline, synthetic, non- fibrous	1318-02-1 930-915-9 - 01-2119429034-49	97-99	/	/	/

3.2 Mixtures

For substances see 3.1.

Product description

EINECS: 215-283-8 and CAS: 1318-02-1 are merely used for information as related numbers and as a pre-registration identifier. EINECS numbers mentioned here have been designated by ECHA after registration.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General notes**

When in doubt or if feeling unwell seek medical assistance.

Following inhalation

Remove patient to fresh air - move out of dangerous area. Ventilate the premises. Inhale fresh air. If symptoms develop and persist, seek medical attention.

Following skin contact

Product is not irritating to the skin. Areas of the body that have come into contact with the product must be rinsed with water.

Following eye contact

If substance has got into eyes, immediately wash out with plenty of water. If irritation persists, seek professional medical attention.

Following ingestion

In case of doubt or if feeling unwell seek medical help.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation

No information.

Following skin contact

No information.

Following eye contact

No information.

Following ingestion

No information.

4.3 Indication of any immediate medical attention and special treatment needed

No information.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

No information.

5.3 Advice for firefighters

Protective actions

In case of fire or heating do not breathe fumes/vapours.

Special protective equipment for fire-fighters

In case of fire: Wear suitable respiratory equipment - self-contained breathing apparatus and full protective equipment.

Additional information

Contaminated firefighting water must be disposed of in accordance with the regulations; do not allow to reach the sewage system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel**Protective equipment**

Use personal protective equipment (Section 8). Thoroughly clean hands after use or contact.

Precautionary measures

Avoid dust generation.

Emergency procedures

No information.

For emergency responders

Wear appropriate personal protective equipment!

6.2 Environmental precautions

If accidental large entry into water or ground occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up**For containment**

No information.

For cleaning up

Pick up mechanically and remove it in accordance with regulation.

Other information

No information.

6.4 Reference to other sections

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling****Protective measures****Measures to prevent fire**

Take precautionary measures against static discharges.

Measures to prevent aerosol and dust generation

Prevent dust formation. Ensure good ventilation and extraction.

Measures to protect the environment

Avoid release to the environment.

Other measures

No information.

Advice on general occupational hygiene

Avoid contact with skin and eyes. Use personal protective equipment. Do not eat or drink while working.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions**

Keep in well closed containers. Keep in a dry place. Keep container in a well ventilated place. Keep away from food, drink and animal feeding stuffs. This product is hygroscopic.

Packaging materials

No information.

Requirements for storage rooms and vessels

No information.

Storage temperature

No information.

Storage class

13

Further information on storage conditions

No information.

7.3 Specific end use(s)

Recommendations

No information.

Industrial sector specific solutions

No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

Name	mg/m ³	ml/m ³	Short-term value mg/m ³	Short-term value ml/m ³	Remark	Biological Tolerance Values
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	10	/	/	/	WEL long-term, inhalable	/
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	4	/	/	/	WEL long-term, respirable	/

Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values**For product**

No information.

For components

Name	Type	Exposure route	exp. frequency	Remark	Value
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	Worker	inhalation	long term	/	3 mg/m ³
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	Worker	dermal	long term	/	2.5 mg/kg bw/day

PNEC values**For product**

No information.

For components

Name	Exposure route	Remark	Value
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	fresh water	/	3.2 mg/L
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	marine water	/	0.32 mg/L
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	soil	/	600 mg/kg dw

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices – wash hands at breaks and when done working with material. Handle in accordance with good industrial hygiene and safety practice.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

Keep eyewash bottles or personal eyewash units available.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration.

Personal protective equipment

Eye and face protection

Safety glasses with side protection (BS EN ISO 16321-1:2022/A1:2025).

Hand protection

Protective gloves (EN 374).

Appropriate materials

No information.

Skin protection

Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345).

Respiratory protection

Not needed under normal use and adequate ventilation. Mask with dust filter (P2) or FFP2 (EN 149).

Thermal hazards

No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure

No information.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

Technical measures to prevent exposure

No information.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Important health, safety and environmental information

Physical state	solid
Shape	granules
Colour	white
Odour	no odour
Odour threshold	No information.
Melting/freezing point or softening point	No information.
Boiling point or initial boiling point and boiling range	No information.
Flammability	No information.
Lower and upper explosion limit	No information.
Flash point	No information.
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	
Viscosity	No information.
Solubility	No information.
Partition coefficient n-octanol/water (log value)	No information.
Vapour pressure	No information.
Bulk density	250 — 650 kg/m ³
Relative vapour/gas density	No information.
Particle characteristics	No information.

9.2 Other information

Information with regard to physical hazard classes

No information.

Other safety characteristics

No information.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Product is stable under normal conditions.

10.3 Possibility of hazardous reactions

The product is stable under recommended storage and handling conditions.

10.4 Conditions to avoid

No special precautions required. Consider the directions for use and storage. Protect from moisture and water - keep in dry place.

10.5 Incompatible materials

Not known.

10.6 Hazardous decomposition products

Under normal use conditions no hazardous decomposition products are expected.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

(a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	Value	Method	Remark
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	oral	LD ₅₀	Dog	/	1000 - 31600 mg/kg	/	/
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	oral	LD ₅₀	rat	/	5000 - 31600 mg/kg	/	/

(b) Skin corrosion/irritation

For components

Name	Species	Time	Result	Method	Remark
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	/	/	Non-irritant.	/	/

(c) Serious eye damage/irritation

No information.

(d) Respiratory or skin sensitisation

For components

Name	Exposure route	Species	Time	Result	Method	Remark
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	-	/	/	Non sensitising.	/	/

(e) (Germ cell) mutagenicity

For components

Name	Type	Species	Time	Result	Method	Remark
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	/	/	/	Negative.	/	/

(f) Carcinogenicity**For components**

Name	Exposure route	Type	Species	Time	Value	Result	Method	Remark
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	/	/	/	/	/	Negative	/	/

(g) Reproductive toxicity**For components**

Name	Reproductive toxicity type	Type	Species	Time	Value	Result	Method	Remark
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	-	-	/	/	/	Negative.	/	/

(h) STOT-single exposure

No information.

(i) STOT-repeated exposure

No information.

(j) Aspiration hazard

No information.

Symptoms related to the physical, chemical and toxicological characteristics

No information.

Interactive effects

No information.

11.2 Information on other hazards**Endocrine disrupting properties**

The product does not contain substances with the potential for endocrine disorders.

Other information

No information.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity****Acute (short-term) toxicity**

For components

Name	Type	Value	Exposure time	Species	Organism	Method	Remark
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	EC ₅₀	> 100 mg/L	48 h	daphnia	/	/	/
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	LC ₅₀	> 680 mg/L	96 h	fish	/	/	/
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	EC ₅₀	> 300 mg/L	96 h	algae	/	/	/

Chronic (long-term) toxicity**For components**

Name	Type	Value	Exposure time	Species	Organism	Method	Remark
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	NOEC	> 86.7 mg/L	/	fish	/	/	/
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	NOEC	32 mg/L	/	aquatic invertebrate	/	/	/
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	NOEC	> 200 mg/L	/	sediment organisms	/	/	/
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	LC ₅₀	9000 mg/kg soil dw	23 days	Terrestrial plants	/	OECD 208	seedling emergence
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	EC ₅₀	9000 mg/kg soil dw	/	Terrestrial plants	/	OECD 208	seedling growth
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	NOEC	5000 mg/kg soil dw	/	Terrestrial plants	/	OECD 208	/

12.2 Persistence and degradability**Abiotic degradation, physical- and photo-chemical elimination**

No information.

Biodegradation

No information.

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log value)

No information.

Bioconcentration factor (BCF)

For components

Name	Species	Organism	Value	Duration	Evaluation	Method	Remark
Zeolite, cuboidal, crystalline, synthetic, non-fibrous	-	/	/	/	Does not bioaccumulate.	/	/

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption

No information.

12.5 Results of PBT and vPvB assessment

The components in this product do not meet the criteria for classification as PBT or vPvB.

12.6 Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

12.7 Other adverse effects

No information.

12.8 Additional information

For product

Avoid release to the environment. Water hazard class: 0 (self-assessment), does not endanger water.

For components

Zeolite, cuboidal, crystalline, synthetic, non-fibrous

WGK: 0

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Waste chemical

Waste should be handled in accordance with national regulations.

Waste codes / waste designations according to LoW

No information.

Packaging

Deliver completely emptied containers to approved waste disposal authorities.

Waste codes / waste designations according to LoW

No information.

Waste treatment-relevant information

Disposal in accordance with the Rules on the management of waste.

Sewage disposal-relevant information

No information.

Other disposal recommendations

No information.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number or ID number

ADR/RID	IMDG	IATA	ADN
Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.

14.2 UN proper shipping name

ADR/RID	IMDG	IATA	ADN
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable

14.3 Transport hazard class(es)

ADR/RID	IMDG	IATA	ADN
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable

14.4 Packing group

ADR/RID	IMDG	IATA	ADN
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable

14.5 Environmental hazards

ADR/RID	IMDG	IATA	ADN
NO	NO	NO	NO

14.6 Special precautions for user

ADR/RID	IMDG	IATA	ADN
Limited quantities: Not given/not applicable	Limited quantities: Not given/not applicable		Limited quantities: Not given/not applicable

14.7 Maritime transport in bulk according to IMO instruments

ADR/RID	IMDG	IATA	ADN
/	Not given/not applicable	/	/

SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

- EH40/2005 Workplace exposure limits (Fourth Edition 2020)

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents

No information.

Special instructions

No information.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Indication of changes

1.1 Product identifier 1.4 Emergency Telephone Number 3.1 Substances 8.1 Control parameters 8.2 Exposure controls 11.2 Information on other hazards 12.1 Toxicity 12.6 Endocrine disrupting properties 14.3 Transport hazard class(es) 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Key literature references and sources for data

No information.

Abbreviations and acronyms

ATE - Acute Toxicity Estimate

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

CEN - European Committee for Standardisation

C&L - Classification and Labelling

CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

CAS# - Chemical Abstracts Service number

CMR - Carcinogen, Mutagen, or Reproductive Toxicant

CSA - Chemical Safety Assessment

CSR - Chemical Safety Report

DMEL - Derived Minimal Effect Level

DNEL - Derived No Effect Level

DPD - Dangerous Preparations Directive 1999/45/EC

DSD - Dangerous Substances Directive 67/548/EEC

DU - Downstream User

EC - European Community

ECHA - European Chemicals Agency

EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)

EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)

EEC - European Economic Community

EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre
Kow - octanol-water partition coefficient
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals (Regulation (EC) No 1907/2006)
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

No information.