

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

1.1 Product identifier

Product name

ZC9

Synonyms

Zeolite compound / Zeolith Compound ZC9



<https://my.chemius.net/p/N7m9fW/en/pd/en>

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

Relevant identified uses

The mixture of raw materials for the production of detergents.

Uses advised against

No information.

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

No information.

Additional information

The substances in the mixture 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

For mixtures see 3.2.

3.2 Mixtures

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Conc. Limits	Notes for substances
Zeolite	1318-02-1 215-283-8 - 01-2119429034-49-0017	85-91	/	/	/
2-propenoic acid, polymer with 2,5-furandione, sodium salt (acrylic acid/maleic acid - copolymer, sodium salt)	52255-49-9 610-814-3 -	9,0-9,6	/	/	/
(1-hydroxyethylidene) bisphosphonic acid, sodium salt	29329-71-3 249-559-4 - 01-2119510382-52-0001	0,6-0,8	Met. Corr. 1; H290 Acute Tox. 4; H302	/	/

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency.

Following inhalation

Remove patient to fresh air - move out of dangerous area. Ventilate the premises. Inhale fresh air. Seek medical help immediately.

Following skin contact

Areas of the body that have come into contact with the product must be rinsed immediately with plenty of running water. If irritation of skin persists seek medical attention.

Following eye contact

Immediately flush eyes with plenty of water while keeping eyelids apart (at least 15 minutes). Consult a physician immediately!

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. Use the usual extinguishing measures (carbon dioxide (CO₂), dry chemical, foam; water spray)

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

No information.

Additional information

No information.

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). Wear safety gloves and glasses. Thoroughly clean hands after use or contact.

Precautionary measures

No information.

Emergency procedures

No information.

For emergency responders

High risk of slipping due to leakage/spillage of product.

6.2 Environmental precautions

Use appropriate containment to dispose waste (according to current regulation-section 13.) 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**

No information.

Measures to prevent aerosol and dust generation

Prevent dusting.

Measures to protect the environment

No information.

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.

Packaging materials

No information.

Requirements for storage rooms and vessels

No information.

Storage class

No information.

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**

No information.

Information on monitoring procedures

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. 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
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	Consumer	oral	short term systemic effects	/	6.5 mg/kg bw
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	Consumer	oral	long term systemic effects	/	6.5 mg/kg bw/day

PNEC values**For product**

No information.

For components

Name	Exposure route	Remark	value
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	fresh water	/	0.134 mg/L
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	marine water	/	0.014 mg/L
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	soil	/	41 mg/kg
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	water treatment plant	/	20 mg/L
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	marine water sediment	dry weight	5.9 mg/kg

Name	Exposure route	Remark	value
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	fresh water sediment	dry weight	59 mg/kg

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Avoid contact with eyes and skin.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse. Keep eyewash bottles or personal eyewash units available.

Technical measures to prevent exposure

No information.

Personal protective equipment

Eye and face protection

Safety glasses with side protection (EN 166). Eye wash bottle with clean water.

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). Avoid contact with skin. Shower.

Respiratory protection

Wear suitable protective breathing mask (EN 136) with filter A2-P2 (EN 14387).

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

Physical state

solid

Colour

white

Odour

no odour

Important health, safety and environmental information

Odour threshold	No information.
Melting point/Freezing 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	10 – 11
Viscosity	No information.
Solubility	No information.
Partition coefficient	No information.
Vapour pressure	No information.
Density and/or relative density	Bulk density: 520 – 620 kg/m ³
Relative vapour density	No information.
Particle characteristics	No information.

9.2 OTHER INFORMATION

Explosive properties	No information.
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SECTION 10: STABILITY AND REACTIVITY**10.1 Reactivity**

No information.

10.2 Chemical stability

Product is stable under normal conditions.

10.3 Possibility of hazardous reactions

No information.

10.4 Conditions to avoid

Follow directions for use and storage. Protect from moisture and water - keep in dry place.

10.5 Incompatible materials

No information.

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
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	oral	LD ₅₀	rat	/	940 mg/kg bw	OECD 401	/
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	oral	ATE	/	/	940 mg/kg bw	/	/

(b) Skin corrosion/irritation

For components

Name	Species	Time	result	Method	Remark
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	/	/	Non-irritant.	/	/

(c) Serious eye damage/irritation

For components

Name	Exposure route	Species	Time	result	Method	Remark
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	/	/	/	Irritating.	/	/

(d) Respiratory or skin sensitisation

For components

Name	Exposure route	Species	Time	result	Method	Remark
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	dermal	/	/	Non sensitising.	/	/

(e) (Germ cell) mutagenicity

No information.

(f) Carcinogenicity

No information.

(g) Reproductive toxicity

No information.

Summary of evaluation of the CMR properties

No information.

(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**

No information.

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
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	LC ₅₀	195 mg/L	/	fish	<i>Oncorhynchus mykiss</i>	OECD 203	/
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	LC ₅₀	> 250 mg/L	/	Aquatic organisms	<i>Photobacterium phosphoreum</i>	DIN 38412/part 8	/
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	EC ₅₀	527 mg/L	/	crustacea	<i>Daphnia magna</i>	OECD 202	/

Chronic (long-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	NOEC	200 mg/l	/	/	/	/	/
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	NOEC	6.75 mg/l	/	crustaceans	<i>Daphnia magna</i>	EPA 66013-75-009	/

12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination

No information.

Biodegradation**For components**

Name	Type	Rate	Time	Evaluation	Method	Remark
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	aerobic	1.6 %	/	not readily biodegradable	/	/

12.3 Bioaccumulative potential

Partition coefficient**For components**

Name	Media	value	Temperature °C	pH	Concentration	Method
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	Log Pow	-3.5	/	/	/	/

Bioconcentration factor (BCF)

No information.

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption**For components**

Name	Type	Criterion	value	Evaluation	Method	Remark
(1-hydroxyethylidene)bisphosphonic acid, sodium salt	Soil	log KOC	16610	/	/	/

12.5 Results of PBT and vPvB assessment

No evaluation.

12.6 Endocrine disrupting properties

No information.

12.7 Other adverse effects

No information.

12.8 Additional information

For product

Avoid release to the environment.

For components

(1-hydroxyethylidene)bisphosphonic acid, sodium salt

No bioaccumulation expected. This substance is not PBT-/vPvB..

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / Packaging disposal

Waste chemical

Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste.

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

No information.

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

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

not applicable

Regulation EC 648/2004 on detergents

No information.

Special instructions

Water hazard class: 2, annex 4.

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

2.3 Other hazards 4.1 Description of first aid measures 9.1 Information on basic physical and chemical properties 9.2 OTHER INFORMATION 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 12.6 Endocrine disrupting properties 12.7 Other adverse effects 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Key literature references and sources for data

ZC9, Silkem, d. o. o., Version 1.0

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

H290 May be corrosive to metals.
H302 Harmful if swallowed.