



Safety Data Sheet dated 3/8/2019, version 1

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

1.1. Product identifier

Mixture identification:

Trade name: BIOSAN DL

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

Identified use:

Bio-gelling agent based on polymeric quaternary salts with a strong hygienic and algicidal effect for water treatment of cooling circuits and evaporative towers and for the treatment of closed circuits subject to bacterial contamination and legionella contamination. Prevents corrosion phenomena due to biofilm. Not foaming.

Uses advised against:

Any other use different from the identified uses.

1.3. Details of the supplier of the safety data sheet

Company:

BARCHEMICALS SRL  
VIA S.ALLENDE 14  
CASTELNUOVO RANGONE (MO)  
ITALY  
PHONE. +39 059/536502  
FAX. +39 059/536742  
www.barchemicals.it

Competent person responsible for the safety data sheet:

barani.corrado@barchemicals.it

1.4. Emergency telephone number

Barani Dr.Corrado - MOBILE PHONE. +39 335/6109383

**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

EC regulation criteria n°1272/2008 (CLP)



Warning, Acute Tox. 4, Harmful if swallowed.



Warning, Aquatic Chronic 1, Very toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H302 Harmful if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

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P102 Keep out of reach of children.  
 P264 Wash ... Thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P273 Avoid release to the environment.  
 P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor/... if you feel unwell.  
 P391 Collect spillage.  
 P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:  
None

Special provisions according to Annex XVII of REACH and subsequent amendments:  
None




2.3. Other hazards  
 vPvB Substances: None - PBT Substances: None  
 Other Hazards:  
 No other hazards

**SECTION 3: Composition/information on ingredients**

3.1. Substances  
N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 60% - < 70%	Methanamine, N-methyl-,polymer with 2-(chloromethyl)oxiran e	CAS: 25988-97-0 EC: 687-444-4	 3.1/4/Oral Acute Tox. 4 H302  4.1/A1 Aquatic Acute 1 H400  4.1/C1 Aquatic Chronic 1 H410

**SECTION 4: First aid measures**

4.1. Description of first aid measures

In case of skin contact:

After contact with skin, wash immediately with soap and plenty of water.  
 Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.  
 Protect uninjured eye.

In case of Ingestion:

Rinse well your mouth  
 Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.  
 In case of breathing difficult, bring the injured person into the open air and store it in a comfortable position for breathing. Consult a physician.  
 If breathing is irregular or stopped, administer artificial respiration.

4.2. Most important symptoms and effects, both acute and delayed

In case of accidental ingestion, it can cause abdominal pain and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

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In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

If swallowed, rinse mouth. Consult a doctor as soon as possible.

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**SECTION 5: Firefighting measures**

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Water spray, heavy alcohol foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

In case of fire or overheating, a pressure increase will occur with the possibility of breaking the container. This material is highly toxic to aquatic life with long-term effects. Contaminated water with this material must be contained and must be prevented from accessing waterways, sewers or drains.

Combustion produces toxic gas (Chlorine).

5.3. Advice for firefighters

Immediately isolate the area by removing all persons from the area of the accident in the event of a fire. No action shall be taken involving any personal risk or without proper training.

Firefighters must wear protective equipment and self-contained breathing apparatus (SCBA) with a full-face mask on the working face at positive pressure. Fire extinguishers (including helmets, protective boots and gloves) conforming to European Standard EN469 will provide basic protection for chemical accidents.

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**SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate the surrounding areas.

Prevent entry of foreign and unprotected personnel.

Do not touch or walk on spilled material.

Wear personal protection equipment.

Avoid breathing vapors or mists.

Provide adequate ventilation.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Stop the escape if there is no risk. Move the containers from the spill area. Get closer to the source of overwhelming emission. Prevent spills in sewage systems, waterways, basements or restricted areas. Wash and convey the spilled amounts in a waste treatment plant.

In case of a liquid product, hold and absorb the spillage with inert absorbent material (eg, sand, earth, vermiculite, fossil flour). Store contaminated material in suitable containers and start waste disposal. After collection, rinse the area and the materials with water by retrieving the water used and, if necessary, dispose of it in authorized plants.

6.4. Reference to other sections

See also section 8 and 13

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**SECTION 7: Handling and storage**

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

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Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep in the original container protected from direct sunlight in a dry, cool and well-ventilated area, away from other incompatible materials (see section 10) and food and drink. Keep the container tight and sealed until use. Open containers should be carefully resealed and kept straight to avoid accidental spillage of the product. Do not store in labels without label.

Keep away from food, drink and feed.

Incompatible materials:

See the next paragraph 10.

Instructions as regards storage premises:

Adequately ventilated premises.

**7.3. Specific end use(s)**

See section 1.2.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

No occupational exposure limit available

DNEL Exposure Limit Values

N.A.

PNEC Exposure Limit Values

N.A.

**8.2. Exposure controls**

Eye/face protection:

Eye glasses with side protection. EN166

Protection for skin:

Protective suit.

Protection for hands:

Gloves resistant to chemicals. EN 374

PVC (polyvinyl chloride).

NBR (nitrile rubber).

Respiratory protection:

Ensure adequate ventilation

Where ventilation is insufficient or exposure is prolonged use a respiratory protective device, eg. Type A filter according to EN141 standard.

Thermal Hazards:

Not applicable (the product is handled at room temperature)

Environmental exposure controls:

Do not allow the product to be absorbed from the soil or from entering waterways or sewers. Do not let product enter drains. Discharge into the environment must be avoided.

The product is toxic to the aquatic environment.

Appropriate engineering controls:

Ensure adequate ventilation. Comply with the maximum concentration values in the workplace.

Predict the presence of showers and eye wash fountains at the workplace.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Properties	Value	Method:	Notes:
Appearance and colour:	Liquid Light Blue	--	--
Odour:	Not Available	--	--

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Odour threshold:	Not Available	--	--
pH:	7	--	Solution 1% in water
Melting point / freezing point:	-15 °C	--	--
Initial boiling point and boiling range:	100 °C	--	--
Flash point:	> 100 °C	--	Closed vessel
Evaporation rate:	Not Available	--	--
Solid/gas flammability:	N.A.	--	--
Upper/lower flammability or explosive limits:	N.A.	--	--
Vapour pressure:	Non Dispibile	--	--
Vapour density:	Not Available	--	--
Relative density:	1.15 - 1.18 g/ml	--	at 25 °C
Solubility in water:	Not Available	--	--
Solubility in oil:	Not Available	--	--
Partition coefficient (n-octanol/water):	- 3.13	--	--
Auto-ignition temperature:	Non Disopnibile	--	--
Decomposition temperature:	Not Available	--	--
Viscosity:	N.A.	--	Dynamics
Explosive properties:	Not Available	--	--
Oxidizing properties:	Not Available	--	--

**9.2. Other information**

<b>Properties</b>	<b>Value</b>	<b>Method:</b>	<b>Notes:</b>
Miscibility:	Not Available	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

Stable under normal conditions.

**10.2. Chemical stability**

Stable under recommended storage and handling. Please refer to section 7 of the MSDS.

**10.3. Possibility of hazardous reactions**

Possible dangerous reaction with oxidizing agents.

**10.4. Conditions to avoid**

Stable under normal conditions.

**10.5. Incompatible materials**

Oxidizing agents.

**10.6. Hazardous decomposition products**

Nitrogen oxides.

Hydrochloric acid.

Carbon dioxide and carbon monoxide.

**SECTION 11: Toxicological information**

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11.1. Information on toxicological effects

Toxicological information of the product:

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a) acute toxicity

The product is classified: Acute Tox. 4 H302

Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

Test: LD50 - Route: Oral - Species: Rat = 1676 mg/kg

b) skin corrosion/irritation

Not classified

Based on available data, the classification criteria are not met

c) serious eye damage/irritation

Not classified

Based on available data, the classification criteria are not met

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

f) carcinogenicity

Not classified

Based on available data, the classification criteria are not met

g) reproductive toxicity

Not classified

Based on available data, the classification criteria are not met

h) STOT-single exposure

Not classified

Based on available data, the classification criteria are not met

i) STOT-repeated exposure

Not classified

Based on available data, the classification criteria are not met

j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

Methanamine, N-methyl-,polymer with 2-(chloromethyl)oxirane - CAS: 25988-97-0

a) acute toxicity:

Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

Test: LD50 - Route: Oral - Species: Rat = 1672 mg/kg

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**SECTION 12: Ecological information**

12.1. Toxicity

No information is available on the mixture as a whole. This is the information on eco-toxicological effects of the individual components.

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The product is classified: Aquatic Chronic 1 - H410

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 0.09 mg/l - Duration h: 72

Endpoint: EC50 - Species: Daphnia = 0.14 mg/l - Duration h: 48

Endpoint: EC50 - Species: Daphnia = 5.7 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish = 0.077 mg/l - Duration h: 96

Methanamine, N-methyl-,polymer with 2-(chloromethyl)oxirane - CAS: 25988-97-0

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 0.09 mg/l - Duration h: 72

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- Endpoint: EC50 - Species: Daphnia = 5.7 mg/l - Duration h: 48  
Endpoint: LC50 - Species: Fish = 0.077 mg/l - Duration h: 96
- 12.2. Persistence and degradability  
N.A.
- 12.3. Bioaccumulative potential  
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Bioaccumulation: Bioaccumulative - Test: Kow - Partition coefficient -3.13 - Notes:  
Potenziale basso
- 12.4. Mobility in soil  
N.A.
- 12.5. Results of PBT and vPvB assessment  
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects  
None

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**SECTION 13: Disposal considerations**

- 13.1. Waste treatment methods  
Recover if possible. In so doing, comply with the local and national regulations currently in force.

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**SECTION 14: Transport information**



- 14.1. UN number  
ADR-UN Number: 3082  
IATA-UN Number: 3082  
IMDG-UN Number: 3082
- 14.2. UN proper shipping name  
ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Methanamine, N-methyl-,polymer with 2-(chloromethyl)oxirane)  
IATA-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Methanamine, N-methyl-,polymer with 2-(chloromethyl)oxirane)  
IMDG-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Methanamine, N-methyl-,polymer with 2-(chloromethyl)oxirane)
- 14.3. Transport hazard class(es)  
ADR-Class: 9  
ADR - Hazard identification number: 90  
IATA-Class: 9  
IATA-Label: 9  
IMDG-Class: 9
- 14.4. Packing group  
ADR-Packing Group: II  
IATA-Packing group: II  
IMDG-Packing group: II
- 14.5. Environmental hazards  
ADR-Environmental Pollutant: Yes  
IMDG-Marine pollutant: Marine Pollutant

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Most important toxic component: Methanamine, N-methyl-,polymer with  
2-(chloromethyl)oxirane

- 14.6. Special precautions for user
- |   |               |
|---|---------------|
| ADR-Subsidiary risks:                             | -             |
| ADR-S.P.:   | 274 335 601   |
| ADR-Transport category (Tunnel restriction code): | 3 (E)         |
| IATA-Passenger Aircraft:                          | 964           |
| IATA-Subsidiary risks:                            | -             |
| IATA-Cargo Aircraft:                              | 964           |
| IATA-S.P.:  | A97 A158 A197 |
| IATA-ERG:   | 9L            |
| IMDG-EmS:   | F-A , S-F     |
| IMDG-Subsidiary risks:                            | -             |
| IMDG-Stowage and handling:                        | Category A    |
| IMDG-Segregation:                                 | -             |
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code  
N.A.

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**SECTION 15: Regulatory information**

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
- Dir. 98/24/EC (Risks related to chemical agents at work)
  - Dir. 2000/39/EC (Occupational exposure limit values)
  - Regulation (EC) n. 1907/2006 (REACH)
  - Regulation (EC) n. 1272/2008 (CLP)
  - Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
  - Regulation (EU) 2015/830
  - Regulation (EU) n. 286/2011 (ATP 2 CLP)
  - Regulation (EU) n. 618/2012 (ATP 3 CLP)
  - Regulation (EU) n. 487/2013 (ATP 4 CLP)
  - Regulation (EU) n. 944/2013 (ATP 5 CLP)
  - Regulation (EU) n. 605/2014 (ATP 6 CLP)
  - Regulation (EU) n. 2015/1221 (ATP 7 CLP)
  - Regulation (EU) n. 2016/918 (ATP 8 CLP)
  - Regulation (EU) n. 2016/1179 (ATP 9 CLP)
  - Regulation (EU) n. 2017/776 (ATP 10 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

- Directive 2012/18/EU (Seveso III)
- Regulation (EC) nr 648/2004 (detergents).
- Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

- Seveso III category according to Annex 1, part 1
- Product belongs to category: E1

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

None



## SECTION 16: Other information

### For professional use.

Full text of phrases referred to in Section 3:

H302 Harmful if swallowed.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Acute Tox. 4, H302	Calculation method
Aquatic Chronic 1, H410	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

Liability exclusion clause: The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

For professional use.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization"

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	(ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.