




Safety Data Sheet
EXPOSAN C91

Safety Data Sheet dated 28/8/2017, version 3

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

- 1.1. Product identifier
Mixture identification:
Trade name: EXPOSAN C91
- 1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified use:
High concentration algaecide specially recommended for summer outdoor swimming pools non-foaming algaecide with blueing and lightening effect.
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)
 Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:
No other hazards

- 2.2. Label elements
Hazard pictograms:



Hazard statements:
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:
P102 Keep out of reach of children.
P273 Avoid release to the environment.
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

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- 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 |
|----------------------|---|-----------------------------|---------------------------------|
| >= 0.5% - < 1% | Methanamine, N-methyl-,polymer with 2-(chloromethyl)oxirane | CAS: 25988-97-0 | ⚠ 3.1/4/Oral Acute Tox. 4 H302 |
| | | | 🔥 4.1/A1 Aquatic Acute 1 H400 |
| | | | 🔥 4.1/C1 Aquatic Chronic 1 H410 |
| >= 0.1% - < 0.25% | 2,2'-iminodiethanol; diethanolamine | Index 603-071-00-1 | ⚠ 3.1/4/Oral Acute Tox. 4 H302 |
| | | number: | ⚠ 3.2/2 Skin Irrit. 2 H315 |
| | | CAS: 111-42-2 | 🔥 3.3/1 Eye Dam. 1 H318 |
| | | EC: 203-868-0 | ⚠ 3.9/2 STOT RE 2 H373 |
| | | REACH No.: 01-2119488930-28 | |

SECTION 4: First aid measures

- 4.1. Description of first aid measures
In case of skin contact:
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. 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
None
4.3. Indication of any immediate medical attention and special treatment needed
Treatment:
In case of contact with eyes, rinse immediately for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
If swallowed, rinse mouth and drink water. Consult a doctor as soon as possible.
After contact with skin, wash immediately with plenty of soap and water.

SECTION 5: Firefighting measures

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- 5.1. Extinguishing media
Suitable extinguishing media:
Water.
Carbon dioxide (CO₂).
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.
- 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.

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.
Avoid breathing vapors or mists.
Provide adequate ventilation.
Wear personal protection equipment.
See protective measures under point 7 and 8.
- 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.
Suitable material for taking up: absorbing material, organic, sand
- 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

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.
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

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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

2,2'-iminodiethanol; diethanolamine - CAS: 111-42-2

ACGIH - TWA(8h): 1 mg/m3 - Notes: (IFV), Skin, A3 - Liver and kidney dam

DNEL Exposure Limit Values

2,2'-iminodiethanol; diethanolamine - CAS: 111-42-2

Worker Professional: 1 03 - Consumer: 0.25 03 - Exposure: Human Inhalation -

Frequency: Long Term (repeated)

Worker Professional: 0.13 mg/kg - Consumer: 0.07 mg/kg - Exposure: Human Dermal -

Frequency: Long Term (repeated)

Consumer: 0.06 mg/kg - Exposure: Human Oral - Frequency: Long Term (repeated)

PNEC Exposure Limit Values

2,2'-iminodiethanol; diethanolamine - CAS: 111-42-2

Target: Fresh Water - Value: 0.0022 mg/l

Target: Marine water - Value: 0.00022 mg/l

Target: Freshwater sediments - Value: 0.012 mg/kg

Target: Marine water sediments - Value: 0.0012 mg/kg

Target: Soil (agricultural) - Value: 0.0012 mg/kg

8.2. Exposure controls

Eye/face protection:

Eye glasses with side protection. EN166

Protection for skin:

Wear clothing that provide comprehensive protection to the skin, eg. cotton, rubber, PVC or viton.

Protection for hands:

Gloves resistant to chemicals. EN 374

Respiratory protection:

Not necessary in normal use.

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.

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 | -- | -- |

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| | | | |
|---|---------------|----|-----------|
| Odour: | Odorless | -- | -- |
| Odour threshold: | N.A. | -- | -- |
| pH: | 7 | -- | at 20 °C |
| Melting point / freezing point: | N.A. | -- | -- |
| Initial boiling point and boiling range: | Not Available | -- | -- |
| Flash point: | Not Available | -- | -- |
| Evaporation rate: | Not Available | -- | -- |
| Solid/gas flammability: | N.A. | -- | -- |
| Upper/lower flammability or explosive limits: | N.A. | -- | -- |
| Vapour pressure: | Not Available | -- | -- |
| Vapour density: | Not Available | -- | -- |
| Relative density: | 1.01 Kg/l | -- | 760 mm Hg |
| Solubility in water: | Complete | -- | -- |
| Solubility in oil: | N.A. | -- | -- |
| Partition coefficient (n-octanol/water): | Not Available | -- | -- |
| Auto-ignition temperature: | N.A. | -- | -- |
| Decomposition temperature: | N.A. | -- | -- |
| Viscosity: | Not Available | -- | -- |
| Explosive properties: | N.A. | -- | -- |
| Oxidizing properties: | N.A. | -- | -- |

9.2. Other information

| Properties | Value | Method: | Notes: |
|--------------------------------------|---------------|---------|--------|
| Miscibility: | N.A. | -- | -- |
| Fat Solubility: | N.A. | -- | -- |
| Conductivity: | Not Available | -- | -- |
| 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
No hazardous reactions when stored and handled properly.
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
No one in particular.
- 10.6. Hazardous decomposition products
None under normal conditions of storage and use.

SECTION 11: Toxicological information

- 11.1. Information on toxicological effects
Toxicological information of the product:
N.A.
Toxicological information of the main substances found in the product:

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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

2,2'-iminodiethanol; diethanolamine - CAS: 111-42-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 1600 mg/kg

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

- a) acute toxicity;
- b) skin corrosion/irritation;
- c) serious eye damage/irritation;
- d) respiratory or skin sensitisation;
- e) germ cell mutagenicity;
- f) carcinogenicity;
- g) reproductive toxicity;
- h) STOT-single exposure;
- i) STOT-repeated exposure;
- j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

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

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

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

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

2,2'-iminodiethanol; diethanolamine - CAS: 111-42-2

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 55 mg/l - Duration h: 48

Endpoint: NOEC - Species: Daphnia = 0.78 mg/l - Duration h: 504

Endpoint: LC50 - Species: Fish = 1460 mg/l - Duration h: 96

Endpoint: EC50 - Species: Algae = 2.2 mg/l - Duration h: 96

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

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

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.

Additional disposal information:

Retrieve if possible. Send to authorized disposal plants or incineration under controlled conditions. Work according to local and national regulations. Recover if possible. Send to authorized disposal plants or for incineration under controlled conditions. Operate according to local and national regulations.

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: III
 IATA-Packing group: III
 IMDG-Packing group: III
- 14.5. Environmental hazards
 ADR-Environmental Pollutant: Yes
 IMDG-Marine pollutant: Marine Pollutant
 Most important toxic component: Methanamine, N-methyl-,polymer with 2-(chloromethyl)oxirane
- 14.6. Special precautions for user
 ADR-Subsidiary risks: -
 ADR-S.P.: 274 335 375 601
 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.

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)

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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)

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: E2

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.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

| Hazard class and hazard category | Code | Description |
|----------------------------------|------------|--|
| Acute Tox. 4 | 3.1/4/Oral | Acute toxicity (oral), Category 4 |
| Skin Irrit. 2 | 3.2/2 | Skin irritation, Category 2 |
| Eye Dam. 1 | 3.3/1 | Serious eye damage, Category 1 |
| STOT RE 2 | 3.9/2 | Specific target organ toxicity - repeated exposure, Category 2 |
| Aquatic Acute 1 | 4.1/A1 | Acute aquatic hazard, category 1 |
| Aquatic Chronic 1 | 4.1/C1 | Chronic (long term) aquatic hazard, category 1 |
| Aquatic Chronic 2 | 4.1/C2 | Chronic (long term) aquatic hazard, category 2 |

Paragraphs modified from the previous revision:

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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

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.
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" (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.

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