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| <b>SAFETY DATA SHEET</b>   | Revision Date: 10/09/2020 |
|  | Print Date: 03/09/2021    |
|  | SDS Number: 000000273061  |
| Biosperse™ CX9071 MICROBIOCIDE<br>™ Trademark, Solenis or its subsidiaries or affiliates,<br>registered in various countries<br>879272 | Version: 1.0              |

## SECTION 1. IDENTIFICATION

### Product identifier

Trade name : Biosperse™ CX9071  
MICROBIOCIDE  
™ Trademark, Solenis or its subsidiaries or affiliates,  
registered in various countries

### Recommended use of the chemical and restrictions on use

|  |  |
|--|--|
| <b>Details of the supplier of the safety data sheet</b><br>Solenis Canada ULC<br>942 Brant St.<br>Burlington, ON L7R 3X8<br>Canada<br><br>RegulatoryRequestsNA@solenis.com<br>Solenis Canada ULC | <b>Emergency telephone number</b><br>1-844-SOLENIS (844-765-3647)<br><br><b>Product Information</b><br>Contact your local Solenis representative |
|--|--|

## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with the Hazardous Products Regulations

Corrosive to metals : Category 1

Acute toxicity (Inhalation) : Category 4

Skin corrosion : Category 1

Serious eye damage : Category 1

### GHS label elements


Hazard pictograms :



Signal word : Danger

Hazard statements : H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H332 Harmful if inhaled.

Precautionary statements : **Prevention:**  
P234 Keep only in original packaging.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

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P264 Wash skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.  
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
 P363 Wash contaminated clothing before reuse.  
 P390 Absorb spillage to prevent material damage.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Components**

| Chemical name           | CAS-No.      | Concentration (% w/w) |
|-------------------------|--------------|-----------------------|
| Sodium N-bromosulfamate | 1004542-84-0 | >= 20 - < 30          |
| sodium hydroxide        | 1310-73-2    | >= 1.5 - < 5          |


Actual concentration or concentration range is withheld as a trade secret

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**SECTION 4. FIRST AID MEASURES**

General advice : Move out of dangerous area.  
 Consult a physician.  
 Show this safety data sheet to the doctor in attendance.  
 Do not leave the victim unattended.


If inhaled : Move to fresh air.  
 IF INHALED: Call a POISON CENTER/ doctor if you feel unwell.

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|   |   | Keep patient warm and at rest.<br>If unconscious, place in recovery position and seek medical advice.   |  |
| In case of skin contact                                     | : | If on skin, rinse well with water.<br>Wash contaminated clothing before re-use.   |  |
| In case of eye contact                                      | : | In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>Continue rinsing eyes during transport to hospital.<br>Remove contact lenses.<br>Protect unharmed eye.   |  |
| If swallowed  | : | Get medical attention immediately.<br>Do NOT induce vomiting.<br>Rinse mouth with water.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.  |  |
| Most important symptoms and effects, both acute and delayed | : | Causes serious eye damage.<br>Harmful if inhaled.<br>Causes severe burns.<br>Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:<br>irritation (nose, throat, airways)<br>Cough<br>lung edema (fluid buildup in the lung tissue)<br>Difficulty in breathing |  |
| Notes to physician  | : | No hazards which require special first aid measures.  |  |

## SECTION 5. FIREFIGHTING MEASURES

|                                      |   |  |
|--------------------------------------|---|--|
| Suitable extinguishing media         | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Water spray<br>Foam<br>Carbon dioxide (CO2)<br>Dry chemical |
| Unsuitable extinguishing media       | : | High volume water jet  |
| Specific hazards during firefighting | : | Do not allow run-off from fire fighting to enter drains or water courses.  |
| Hazardous combustion products        | : | corrosive vapors<br>Sodium oxides<br>toxic fumes   |

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- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.  
Comply with all applicable federal, state, and local regulations.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

## SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Avoid formation of aerosol.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Do not breathe vapours/dust.  
Do not smoke.  
When diluting, always add the product to water. Never add water to the product.  
Container hazardous when empty.  
Avoid contact with skin and eyes.  
Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.

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Recommended storage temperature : > -4 °C

Further information on storage stability : No decomposition if stored and applied as directed.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

| Components       | CAS-No.   | Value type<br>(Form of exposure) | Control parameters /<br>Permissible concentration | Basis     |
|------------------|-----------|----------------------------------|---|-----------|
| sodium hydroxide | 1310-73-2 | (c)                              | 2 mg/m <sup>3</sup>                               | CA AB OEL |
|                  |           | C                                | 2 mg/m <sup>3</sup>                               | CA BC OEL |
|                  |           | C                                | 2 mg/m <sup>3</sup>                               | CA QC OEL |

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

### Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.


A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Safety glasses

Skin and body protection : Wear as appropriate:  
Impervious clothing  
Chemical resistant apron

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#### Safety shoes

Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
 Discard gloves that show tears, pinholes, or signs of wear.  
 Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.  
 When using do not eat or drink.  
 Ensure that eyewash stations and safety showers are close to the workstation location.  
 When using do not smoke.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : yellow, to, light orange

Odour : mild, chlorine-like

Odour Threshold : No data available

pH : 12 - 13

Melting point/freezing point : < -4 °C

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : The product is not flammable.

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available


Relative vapour density : No data available

Relative density : No data available

Density : 1.30 - 1.35 g/cm<sup>3</sup>

Solubility(ies)



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dermal toxicity, category 5.

**Components:**

**Sodium N-bromosulfamate:**

Acute oral toxicity : Assessment: The component/mixture is classified as acute oral toxicity, category 4.

**sodium hydroxide:**

Acute oral toxicity : LD Lo (Rabbit): 500 mg/kg

**Skin corrosion/irritation**

Causes severe burns.

**Product:**

Result : Corrosive to skin

Remarks : Causes severe skin burns and eye damage.  
The feeling of irritation or pain may be delayed.

**Components:**

**Sodium N-bromosulfamate:**

**sodium hydroxide:**

Result : Causes severe burns.

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Product:**

Result : Corrosive to eyes

Remarks : May cause irreversible eye damage.

**Components:**

**Sodium N-bromosulfamate:**

Result : Corrosive to eyes


**sodium hydroxide:**

Result : Corrosive to eyes

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

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#### Respiratory sensitisation

Not classified based on available information.

#### Germ cell mutagenicity

Not classified based on available information.

#### Carcinogenicity

Not classified based on available information.

#### Reproductive toxicity

Not classified based on available information.

#### STOT - single exposure

Not classified based on available information.

#### STOT - repeated exposure

Not classified based on available information.

#### Aspiration toxicity

Not classified based on available information.

#### Further information

##### Product:


Remarks : No data available

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

|   |  |
|---|--|
| Toxicity to fish                                    | : LC50 (Pimephales promelas (fathead minnow)): 9.35 mg/l<br>End point: mortality<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
|   | NOEC (Pimephales promelas (fathead minnow)): 3.46 mg/l<br>End point: mortality<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203   |
| Toxicity to daphnia and other aquatic invertebrates | : EC50 (Daphnia magna (Water flea)): 3.83 mg/l<br>End point: Immobilization<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202      |
|   | NOEC (Daphnia magna (Water flea)): 1.24 mg/l<br>End point: Immobilization<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202        |
| Toxicity to algae/aquatic plants                    | : EC50 (Selenastrum capricornutum (green algae)): 13.4 mg/l<br>End point: Growth inhibition  |

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Exposure time: 72 h  
Method: OECD Test Guideline 201

NOEC (*Selenastrum capricornutum* (green algae)): 3.46 mg/l  
End point: Growth inhibition  
Exposure time: 72 h  
Method: OECD Test Guideline 201

#### **Components:**

##### **sodium hydroxide:**

Toxicity to fish : LC 50 (Western mosquitofish (*Gambusia affinis*)): 125 mg/l  
Exposure time: 96 h  
Method: Static  
Remarks: Mortality

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (*Daphnia magna*)): 34.59 - 47.13 mg/l  
Exposure time: 48 h  
Remarks: Intoxication

##### **Persistence and degradability**

No data available

##### **Bioaccumulative potential**

No data available

##### **Mobility in soil**

No data available

##### **Other adverse effects**

##### **Product:**

Additional ecological information : No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

##### **Disposal methods**

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.

Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

UN number : UN 1760  
 Proper shipping name : Corrosive liquid, n.o.s. (BROMIDE SALT)  
 Class : 8  
 Packing group : III  
 Packing instruction (cargo aircraft) : 856  
 Packing instruction (passenger aircraft) : 852

#### IMDG-Code

UN number : UN 1760  
 Proper shipping name : CORROSIVE LIQUID, N.O.S. (BROMIDE SALT)  
 Class : 8  
 Packing group : III  
 EmS Code : F-A, S-B  
 Marine pollutant : no

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### TDG

UN number : UN 1760  
 Proper shipping name : CORROSIVE LIQUID, N.O.S. (BROMIDE SALT)  
 Class : 8  
 Packing group : III  
 ERG Code : 154


### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

### The components of this product are reported in the following inventories:

TCSI : Not in compliance with the inventory  
 TSCA : Exempt  
 AICS : Not in compliance with the inventory  
 DSL : Exempt

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ENCS : Not in compliance with the inventory  
 KECI : Not in compliance with the inventory  
 PICCS : Not in compliance with the inventory  
 IECSC : Not in compliance with the inventory

#### Canadian lists

No substances are subject to a Significant New Activity Notification.

#### Biocides

PCPA Reg. # PCPA: 33854

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## SECTION 16. OTHER INFORMATION


#### Further information

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#### Full text of other abbreviations

CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)  
 CA BC OEL : Canada. British Columbia OEL  
 CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants  
 CA AB OEL / (c) : ceiling occupational exposure limit  
 CA BC OEL / C : ceiling limit  
 CA QC OEL / C : Ceiling

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No

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Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

#### Sources of key data used to compile the Safety Data Sheet

Key literature references and sources of data

SOLENIS Internal data

SOLENIS internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

CA / EN