

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 17.04.2012

Rev. Index : 4

Revision: 17.04.2012

## \* 1 Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Trade name:** **Fi-CLOR™ SPA BROMINE TABLETS**

**Article number:** 11500 FiClor 2

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

**Sector of Use** SU21 Consumer uses: Private households / general public / consumers

#### Product category

PC37 Water treatment chemicals

PC8 Biocidal products (e.g. Disinfectants, pest control)

#### Application of the substance / the preparation

Water treatment

Water disinfectant

### 1.3 Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

Arch Water Products France now part of

LONZA MICROBIAL CONTROL

BP 219 - 37402 Amboise Cedex - FRANCE

phone : +33 (0)2 47 23 43 00

fax : +33 (0)2 47 23 12 21

framsds-reach.france.euwater@lonza.com

#### Further information obtainable from:

ARCH CHEMICALS Ltd now part of

LONZA MICROBIAL CONTROL

Wheldon Road - Castleford - West Yorkshire WF10 2JT - ENGLAND

Telephone: + 44 (0) 1977 714 100

Fax: + 44 (0) 1977 714 002

### 1.4 Emergency telephone number:

Europe >>> NCEC - Tel. +44 (0)1235 239 670

Africa & Middle East >>> NCEC - Tel. +44 (0)1235 239 671

N.AMERICA >>> ACEAN (Arch Chemicals Emergency Action Network) - Tel. +1 423 780 2970}

CALL A LOCAL NATIONAL POISON CONTROL UNIT

FOR UK CONTACT NCEC Tel 01865 407 333

## \* 2 Hazards identification

### 2.1 Classification of the substance or mixture

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



GHS03 flame over circle

Ox. Sol. 2

H272 May intensify fire; oxidiser.

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GHS05 corrosion

Skin Corr. 1B      H314 Causes severe skin burns and eye damage.



GHS09 environment

Aquatic Chronic 1   H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4      H302 Harmful if swallowed.

Skin Sens. 1      H317 May cause an allergic skin reaction.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

C; Corrosive

R34:      Causes burns.



Xn; Harmful

R22:      Harmful if swallowed.



Xi; Sensitising

R43:      May cause sensitisation by skin contact.



N; Dangerous for the environment

R50/53:   Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R31:      Contact with acids liberates toxic gas.

**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

**Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

**Hazard pictograms**

GHS03 GHS05 GHS07 GHS09

**Signal word** Danger**Hazard-determining components of labelling:**

bromochloro-5,5-dimethylimidazolidine-2,4-dione

**Hazard statements**

H272      May intensify fire; oxidiser.

H302+EUH031 Harmful if swallowed. Contact with acids liberates toxic gas.

H314      Causes severe skin burns and eye damage.

H317      May cause an allergic skin reaction.

H410      Very toxic to aquatic life with long lasting effects.

Warning! Do not use together with other products. May release dangerous gases (chlorine).

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







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**Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P220	Keep/Store away from clothing/combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use for extinction: Water.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.\* **3 Composition/information on ingredients****3.2 Chemical characterization: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 32718-18-6	bromochloro-5,5-dimethylimidazolidine-2,4-dione	50-<100%
EINECS: 251-171-5	 C R34;  Xn R22;  Xi R43;  O R8;  N R50/53 R31	
	 Ox. Sol. 2, H272;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410;  Acute Tox. 4, H302; Skin Sens. 1, H317	
CAS: 10043-35-3	boric acid	<5.5%
EINECS: 233-139-2	 T Repr. Cat. 2 R60-61  Repr. 1B, H360	

**SVHC**

Contains less than de 5.5% of boric acid (Repr. 1B; H360FD: C ≥ 5,5 %).

Boric acid is included in the Candidate List of Substances of Very High Concern (SVHC) of the European Chemical Agency (ECHA)

10043-35-3 boric acid

**Additional information** For the wording of the listed risk phrases refer to section 16.

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## \* 4 First aid measures

### 4.1 Description of first aid measures

#### General information

Take affected persons out into the fresh air.

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### After inhalation

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact** Immediately wash with water and soap and rinse thoroughly.

**After eye contact** Rinse opened eye for several minutes (15) under running water. Then consult a doctor.

#### After swallowing

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

## 5 Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents** CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray.

### 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

### 5.3 Advice for firefighters

**Protective equipment:** Mount respiratory protective device.

**Additional information** Cool endangered receptacles with water spray.

## 6 Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

### 6.2 Environmental precautions:

Keep contaminated washing water and dispose of appropriately.

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### 6.3 Methods and material for containment and cleaning up:

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

### 6.4 Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## \* 7 Handling and storage

**7.1 Precautions for safe handling** Thorough dedusting.

### Handling



DO NOT MIX WITH OTHER PRODUCTS  
DO NOT DISSOLVE BEFORE USE

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**Information about fire - and explosion protection:**

Substance/product is oxidizing when dry.

Substance/product can reduce the ignition temperature of flammable substances.

Keep respiratory protective device available.

**7.2 Conditions for safe storage, including any incompatibilities****Storage****Requirements to be met by storerooms and receptacles:** Store only in unopened original receptacles.**Information about storage in one common storage facility:**

Store away from flammable substances.

Store away from reducing agents.

Do not store together with acids.

**Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

**7.3 Specific end use(s)** No further relevant information available.**8 Exposure controls/personal protection****Additional information about design of technical facilities:** No further data; see item 7.**8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Personal protective equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Respiratory protection:** Not required.**Protection of hands:**

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**

Tightly sealed goggles.

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## \* 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form:	Tablets
Colour:	Whitish
Odour:	Characteristic
Odour threshold:	Not determined.

pH-value (2 g/l) at 20°C: 3.5-4.5

#### Change in condition

Melting point/Melting range:	undetermined
Boiling point/Boiling range:	undetermined

Flash point: Not applicable

Flammability (solid, gaseous) Not determined.

#### Ignition temperature:

Decomposition temperature: 160-170°C

Self-igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

#### Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure at 20°C: 9.35 10(-5) hPa

Density at 20°C: 1.9 g/cm<sup>3</sup>

Relative density Not determined.

Vapour density Not applicable.

Evaporation rate Not applicable.

#### Solubility in / Miscibility with

Water at 20°C: 2 g/l

Segregation coefficient (n-octanol/water): Not determined.

#### Viscosity:

dynamic:	Not applicable.
kinematic:	Not applicable.

#### Solvent content:

Organic solvents: 0.0 %

Solids content: 100.0 %

### 9.2 Other information

No further relevant information available.

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## \* 10 Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

### 10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents

Reacts with alcohols, amines, aqueous acids and alkalis

Reacts with flammable substances

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** Warning! Do not use together with other products. May release dangerous gases (chlorine).

### 10.6 Hazardous decomposition products:

Hydrohalogens

Bromine

Poisonous gases/vapours

## \* 11 Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity:

#### LD/LC50 values relevant for classification:

#### 32718-18-6 bromochloro-5,5-dimethylimidazolidine-2,4-dione

Oral LD50 1500 mg/kg (rat)

Dermal LD50 > 2000 mg/kg (rabbit)

Inhalative LC50 - 4 hrs 0.53 mg/l (rat)

#### 10043-35-3 boric acid

Oral LD50 2660 mg/kg (rat)

#### Primary irritant effect:

**on the skin:** Caustic effect on skin and mucous membranes.

**on the eye:** Strong caustic effect.

**Sensitization:** Sensitization possible through skin contact.

#### Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Contains less than 5.5% of boric acid(Repr. 1B; H360FD: C ≥ 5,5 %).

## \* 12 Ecological information

### 12.1 Toxicity

#### Aquatic toxicity:

#### 32718-18-6 bromochloro-5,5-dimethylimidazolidine-2,4-dione

Oral LC50 - 48 hrs (static) 0.75 mg/l (daphnia magna)

LC50 - 96 hrs (static) 0.46 mg/l (bluegill sunfish)

0.4 mg/l (rainbow trout)

LD50 1839 mg/kg (bobwhite quail)

**12.2 Persistence and degradability** No further relevant information available.

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**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Very toxic for fish**Additional ecological information:****General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

Do not allow product to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

**13.1 Waste treatment methods****Recommendation**

Must be specially treated adhering to official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## \* 14 Transport information

**14.1 UN-Number****ADR, IMDG, IATA**

UN3085

**14.2 UN proper shipping name****IMDG**

OXIDIZING SOLID, CORROSIVE, N.O.S. (bromochloro-5,5-dimethylimidazolidine-2,4-dione), MARINE POLLUTANT

**IATA**

OXIDIZING SOLID, CORROSIVE, N.O.S. (bromochloro-5,5-dimethylimidazolidine-2,4-dione)

**14.3 Transport hazard class(es)****ADR****Class**

5.1 (OC2) Oxidising substances.

**Label**

5.1 + 8

**IMDG****Class**

5.1 Oxidising substances.

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<b>Label</b>	5.1 + 8
<b>IATA</b>	
<b>Class</b>	5.1 Oxidising substances.
<b>Label</b>	5.1 + 8
<b>14.4 Packing group ADR, IMDG, IATA</b>	II
<b>14.5 Environmental hazards: Marine pollutant:</b>	Yes Symbol (fish and tree)
<b>Special marking (ADR):</b>	Symbol (fish and tree)
<b>14.6 Special precautions for user</b>	Warning: Oxidising substances.
<b>Danger code (Kemler):</b>	-
<b>EMS Number:</b>	F-A,S-Q
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>Transport/Additional information:</b>	
<b>ADR</b>	
<b>Excepted quantities (EQ):</b>	E2
<b>Limited quantities (LQ)</b>	1 kg
<b>Tunnel restriction code</b>	E
<b>UN "Model Regulation":</b>	UN3085, OXIDIZING SOLID, CORROSIVE, N.O.S., 5.1 (8)

## \* 15 Regulatory information

### Directive 98/8/EC

Best before : see date on packaging

Providing this container when empty is thoroughly rinsed out in the pool, it may be disposed of via the recycling scheme

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

#### National regulations

**Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

#### Other regulations, limitations and prohibitive regulations

#### Substances of very high concern (SVHC) according to REACH, Article 57

Contains less than de 5.5% of boric acid (Repr. 1B; H360FD: C ≥ 5,5 %).

Boric acid is included in the Candidate List of Substances of Very High Concern (SVHC) of the European Chemical Agency (ECHA)

10043-35-3 boric acid

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## \* 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### Relevant phrases

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

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- H317 May cause an allergic skin reaction.  
H360 May damage fertility or the unborn child.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.
- 
- R22 Harmful if swallowed.  
R31 Contact with acids liberates toxic gas.  
R34 Causes burns.  
R43 May cause sensitisation by skin contact.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R60 May impair fertility.  
R61 May cause harm to the unborn child.  
R8 Contact with combustible material may cause fire.

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

**\* Data compared to the previous version altered.**