

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## ASTRAL Bromo en tabletas

Version: 2

Revision date: 17/01/2017



Page 1 of 9

Print date: 17/01/2017

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING.

#### 1.1 Product identifier.

Product Name: ASTRAL Bromine tablets  
Chemical Name: bromochloro-5,5-dimethylimidazolidine-2,4-dione  
CAS No: 32718-18-6  
EC No: 251-171-5

#### 1.2 Relevant identified uses of the substance and uses advised against.

Desinfectant

#### Uses advised against:

Uses other than those recommended.

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

Company: **FLUIDRA COMMERCIAL, S.A.U.**  
Address: Avda. Francesc Macià, 60, 20ª planta  
City: 08208 Sabadell  
Province: (Barcelona) Spain  
Telephone: Tel: +34 93 724 39 00  
Fax: Fax: +34 93 724 29 93  
E-mail: clientes@fluidra.es  
Web: www.astralpool.com

#### 1.4 Emergency telephone number:

Anti poisoning centre:

ITALY (Rome): 06/305 43 43

ITALY (Milan): 02/66 10 10 29

SPAIN: +34 91 562 04 20

FRANCE (Paris): 01 40 05 48 48

FRANCE (Toulouse): 05 61 77 74 47

FRANCE (Marseille): 04 91 75 25 25

PORTUGAL: 808 250 143

### SECTION 2: HAZARDS IDENTIFICATION.

#### 2.1 Classification of the substance.

In accordance with Regulation (EU) No 1272/2008:

Acute Tox. 4 : Harmful if swallowed.

Aquatic Acute 1 : Very toxic to aquatic life.

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

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

Ox. Sol. 2 : May intensify fire; oxidiser.

#### 2.2 Label elements.

**Labelling in accordance with Regulation (EU) No 1272/2008:**

Pictograms:



-Continued on next page.-

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## ASTRAL Bromo en tabletas



Version: 2  
Revision date: 17/01/2017

Page 2 of 9  
Print date: 17/01/2017

Signal Word:

**Danger**

H statements:

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.

P statements:

P102	Keep out of reach of children.
P405	Store locked up.
P221	Take any precaution to avoid mixing with combustibles.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P270	Do not eat, drink or smoke when using this product.
P261	Avoid breathing dust.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash hands thoroughly after handling.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use appropriate extinguishing products.
P273	Avoid release to the environment.
P391	Collect spillage.
P501	Dispose of contents/container in accordance with applicable regulations.

EUH statements:

EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine).
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Contains:

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

### 2.3 Other hazards.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

### 3.1 Substances.

Chemical Name:	bromochloro-5,5-dimethylimidazolidine-2,4-dione
CAS No:	32718-18-6
CE No:	251-171-5

### 3.2 Mixtures.

Not Applicable.

## SECTION 4: FIRST AID MEASURES.

### 4.1 Description of first aid measures.

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

#### Inhalation.

Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration. Do not administer anything orally. If unconscious, place them in a suitable position and seek medical assistance.

#### Eye contact.

Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

#### Skin contact.

Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. **NEVER** use solvents or thinners.

#### Ingestion.

If accidentally ingested, seek immediate medical attention. Keep calm. **NEVER** induce vomiting.

-Continued on next page.-

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## ASTRAL Bromo en tabletas

Version: 2

Revision date: 17/01/2017



Page 3 of 9

Print date: 17/01/2017

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

Corrosive Product, contact with eyes or skin can cause burns; ingestion or inhalation can cause internal damage, if this occurs immediate medical assistance is required.

Harmful Product, prolonged exposure due to inhalation may cause anaesthetic effects and the need for immediate medical assistance.

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

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

## SECTION 5: FIREFIGHTING MEASURES.

### 5.1 Extinguishing media.

#### Recommended extinguishing methods.

Extinguisher powder or CO<sub>2</sub>. In case of more serious fires, also alcohol-resistant foam and water spray. Do not use a direct stream of water to extinguish.

### 5.2 Special hazards arising from the substance.

#### Special risks.

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

### 5.3 Advice for firefighters.

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

#### Fire protection equipment.

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and gloves.

## SECTION 6: ACCIDENTAL RELEASE MEASURES.

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

For exposure control and individual protection measures, see section 8.

### 6.2 Environmental precautions.

Product dangerous for the environment, in case of large spills or if the product contaminates lakes, rivers, or sewers, inform the responsible authorities according to local legislation. Prevent the contamination of drains, surface or subterranean waters, and the ground.

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

The contaminated area should be immediately cleaned with an appropriate de-contaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

### 6.4 Reference to other sections.

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

## SECTION 7: HANDLING AND STORAGE.

### 7.1 Precautions for safe handling.

For personal protection, see section 8. Never use pressure to empty the containers. They are not pressure-resistant containers.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Keep the product in containers made of a material identical to the original.

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

Store according to local legislation. Observe indications on the label. Store the containers between 5 and 35° C, in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep far away from ignition points. Keep away from

-Continued on next page.-

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## ASTRAL Bromo en tabletas

Version: 2

Revision date: 17/01/2017



Page 4 of 9

Print date: 17/01/2017

oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorised persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

Classification and threshold amount of storage in accordance with Annex I to Directive 2012/18/EU (SEVESO III)::

Code	Description	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
E1	ENVIRONMENTAL HAZARDS - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1	100	200

### 7.3 Specific end use(s).

None in particular.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

### 8.1 Control parameters.

The product does NOT contain substances with Professional Exposure Environmental Limit Values. The product does NOT contain substances with Biological Limit Values.

### 8.2 Exposure controls.

#### Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

<b>Concentration:</b>	100 %		
<b>Uses:</b>	Desinfectant		
<b>Breathing protection:</b>			
PPE:	Particle filter mask		
Characteristics:	«CE» marking, category III. Made of filtering material, it covers nose, mouth and chin.		
CEN standards:	EN 149		
Maintenance:	Check for any tears, defects, etc. before use. Since it is disposable individual protection equipment, it should be replaced after use.		
Observations:	Does not protect worker unless properly adjusted. Follow the manufacturer's instructions regarding suitable use of the equipment.		
Filter Type needed:	P2		
<b>Hand protection:</b>			
PPE:	Non-disposable protective gloves against chemicals.		
Characteristics:	«CE» marking, category III. Check the list of chemicals for which the glove has been tested.		
CEN standards:	EN 374-1, En 374-2, EN 374-3, EN 420		
Maintenance:	A schedule for the periodical replacement of gloves should be established in order to guarantee their replacement before pollutants permeate them. The use of contaminated gloves could be more dangerous than not using gloves, since the pollutant can gradually accumulate in the glove's material.		
Observations:	They are to be replaced whenever tears, cracks or deformations are observed or when exterior dirt could reduce their strength.		
Material:	PVC (polyvinyl chloride)	Breakthrough time (min.):	> 480
		Material thickness (mm):	0,35
<b>Eye protection:</b>			
PPE:	Protective goggles against particle impacts.		
Characteristics:	«CE» marking, category II. Eye protector against dust and smoke.		
CEN standards:	EN 165, EN 166, EN 167, EN 168		
Maintenance:	Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions.		
Observations:	Some signs of wear and tear include: yellow colouring of the lenses, superficial scratching of the lenses, scraping etc.		
<b>Skin protection:</b>			
PPE:	Chemical protective clothing		

-Continued on next page.-

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## ASTRAL Bromo en tabletas



Version: 2

Revision date: 17/01/2017

Page 5 of 9

Print date: 17/01/2017

Characteristics:	«CE» marking, category III. Clothing should fit properly. The level of protection must be set according to a test parameter called BT (Breakthrough Time), which indicates how long it takes for the chemical to pass through the material.
CEN standards:	EN 464, EN 340, EN 943-1, EN 943-2, EN ISO 6529, EN ISO 6530, EN 13034
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.
Observations:	The protective clothing's design should facilitate correct positioning, staying in place without moving for the period of use expected, bearing in mind environmental factors as well as any movement or position the user might adopt while carrying out the activity.
PPE:	Anti-static safety footwear against chemicals.
Characteristics:	«CE» marking, category III. Check the list of chemicals against which the footwear is resistant.
CEN standards:	EN ISO 13287, EN 13832-1, EN 13832-2, EN 13832-3, EN ISO 20344, EN ISO 20345
Maintenance:	For correct maintenance of this kind of safety footwear, it is necessary to observe the instructions specified by the manufacturer. The footwear should be replaced as soon as any sign of damage is observed.
Observations:	The footwear should be cleaned regularly and dried when damp, although it should not be placed too close to a source of heat in order to avoid any sharp changes in temperature.



### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

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

Appearance: Tablets

Colour: White

Odour: Slightly halogen odour

Odour threshold: N.A./N.A.

pH: 3- 5 (1%)

Melting point: 156 - 163 °C

Boiling Point: N.A./N.A.

Flash point: > 60 °C

Evaporation rate: N.A./N.A.

Inflammability (solid, gas): N.A./N.A.

Lower Explosive Limit: N.A./N.A.

Upper Explosive Limit: N.A./N.A.

Vapour pressure: N.A./N.A.

Vapour density: N.A./N.A.

Relative density: 1.8 - 2.0 g/cm<sup>3</sup>

Solubility: 0.15g / 100 cm<sup>3</sup>

Liposolubility: N.A./N.A.

Hydrosolubility: N.A./N.A.

Partition coefficient (n-octanol/water): N.A./N.A.

Auto-ignition temperature: N.A./N.A.

Decomposition temperature: N.A./N.A.

Viscosity: N.A./N.A.

Explosive properties: N.A./N.A.

Oxidizing properties: Si

N.A./N.A. = Not Available/Not Applicable due to the nature of the product

#### 9.2 Other information.

Pour point: N.A./N.A.

Blink: N.A./N.A.

Kinematic viscosity: N.A./N.A.

N.A./N.A. = Not Available/Not Applicable due to the nature of the product

### SECTION 10: STABILITY AND REACTIVITY.

#### 10.1 Reactivity.

If the storage conditions are satisfied, does not produce dangerous reactions.

#### 10.2 Chemical stability.

Unstable in contact with:

-Continued on next page.-

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## ASTRAL Bromo en tabletas



Version: 2

Revision date: 17/01/2017

Page 6 of 9

Print date: 17/01/2017

- Bases.

### 10.3 Possibility of hazardous reactions.

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

May intensify fire; oxidiser.

Neutralization can occur on contact with bases.

### 10.4 Conditions to avoid.

Avoid the following conditions:

- Contact with incompatible materials.
- Avoid contact with bases.

### 10.5 Incompatible materials.

Avoid the following materials:

- Bases.
- Flammable materials.
- Explosives materials.
- Toxic materials.
- Corrosive materials.

### 10.6 Hazardous decomposition products.

Depending on conditions of use, can be generated the following products:

- Oxygen.
- Corrosive vapors or gases.
- Oxidizing gases or vapors.

## SECTION 11: TOXICOLOGICAL INFORMATION.

### 11.1 Information on toxicological effects.

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

#### Toxicological information.

Name	Acute toxicity			
	Type	Test	Kind	Value
bromochloro-5,5-dimethylimidazolidine-2,4-dione  CAS No: 32718-18-6    EC No: 251-171-5	Oral	LD50	Rat	485 mg/kg [1]
		[1] FIFRA		
	Dermal	LD50	Rat	> 2000 mg/kg
	Inhalation			

a) acute toxicity;

Product classified:

Acute toxicity (Oral), Category 4: Harmful if swallowed.

b) skin corrosion/irritation;

Product classified:

Skin Corrosive, Category 1B: Causes severe skin burns and eye damage.

c) serious eye damage/irritation;

Based on available data, the classification criteria are not met.

d) respiratory or skin sensitisation;

Product classified:

Skin sensitiser, Category 1: May cause an allergic skin reaction.

e) germ cell mutagenicity;

Not conclusive data for classification.

f) carcinogenicity;

Not conclusive data for classification.

-Continued on next page.-

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## ASTRAL Bromo en tabletas



Version: 2

Revision date: 17/01/2017

Page 7 of 9

Print date: 17/01/2017

g) reproductive toxicity;  
Not conclusive data for classification.

h) STOT-single exposure;  
Not conclusive data for classification.

i) STOT-repeated exposure;  
Not conclusive data for classification.

j) aspiration hazard;  
Not conclusive data for classification.

### SECTION 12: ECOLOGICAL INFORMATION.

#### 12.1 Toxicity.

No information is available regarding the ecotoxicity.

#### 12.2 Persistence and degradability.

No information is available about persistence and degradability of the product.

#### 12.3 Bioaccumulative potencial.

No information is available regarding the bioaccumulation.

#### 12.4 Mobility in soil.

No information is available about the mobility in soil.  
The product must not be allowed to go into sewers or waterways.  
Prevent penetration into the ground.

#### 12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

#### 12.6 Other adverse effects.

No information is available about other adverse effects for the environment.

### SECTION 13 DISPOSAL CONSIDERATIONS.

#### 13.1 Waste treatment methods.

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.  
Follow the provisions of Directive 2008/98/EC regarding waste management.

### SECTION 14: TRANSPORT INFORMATION.

Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA for air transport.

**Land:** Transport by road: ADR, Transport by rail: RID.

Transport documentation: Consignment note and written instructions

**Sea:** Transport by ship: IMDG.

Transport documentation: Bill of lading

**Air:** Transport by plane: ICAO/IATA.

Transport document: Airway bill.

# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## ASTRAL Bromo en tabletas



Version: 2

Revision date: 17/01/2017

Page 8 of 9

Print date: 17/01/2017

### 14.1 UN number.

UN No: UN3085

### 14.2 UN proper shipping name.

Description:

ADR: UN 3085, OXIDIZING SOLID, CORROSIVE, N.O.S. (CONTAINS BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE), 5.1 (8), PG III, (E)

IMDG: UN 3085, OXIDIZING SOLID, CORROSIVE, N.O.S. (CONTAINS BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE), 5.1 (8), PG III, MARINE POLLUTANT

ICAO: UN 3085, OXIDIZING SOLID, CORROSIVE, N.O.S. (CONTAINS BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE), 5.1 (8), PG III

### 14.3 Transport hazard class(es).

Class(es): 5.1

### 14.4 Packing group.

Packing group: III

### 14.5 Environmental hazards.

Marine pollutant: Yes



Dangerous for the environment

### 14.6 Special precautions for user.

Labels: 5.1, 8



Hazard number: 58

ADR LQ: 5 kg

IMDG LQ: 5 kg

ICAO LQ: 5 kg

Provisions concerning carriage in bulk ADR: Not authorized carriage in bulk in accordance with ADR.

Transport by ship, FEm – Emergency sheets (F – Fire, S – Spills): F-A,S-Q

Proceed in accordance with point 6.

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code.

The product is not transported in bulk.

## SECTION 15: REGULATORY INFORMATION.

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

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): E1

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

-Continued on next page.-



# SAFETY DATA SHEET

(in accordance with Regulation (EU) 2015/830)

## ASTRAL Bromo en tabletas

Version: 2

Revision date: 17/01/2017



Page 9 of 9

Print date: 17/01/2017

### 15.2 Chemical safety assessment.

There has been no evaluation a chemical safety assessment of the product.

## SECTION 16: OTHER INFORMATION.

Classification codes:

Acute Tox. 4 [Oral] : Acute toxicity (Oral), Category 4  
Aquatic Acute 1 : Acute toxicity to the aquatic environment, Category 1  
Eye Dam. 1 : Serious eye damage, Category 1  
Ox. Sol. 2 : Oxidising solid, Category 2  
Skin Corr. 1B : Skin Corrosive, Category 1B  
Skin Sens. 1 : Skin sensitiser, Category 1

Sections changed compared with the previous version:

1,2,3,4,6,10,11,14,16

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Information on the TSCA Inventory (Toxic Substances Control Act) USA:

CAS No	Name	State
32718-18-6	bromochloro-5,5-dimethylimidazolidine-2,4-dione	

Abbreviations and acronyms used:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
CEN: European Committee for Standardization.  
PPE: Personal protection equipment.  
IATA: International Air Transport Association.  
ICAO: International Civil Aviation Organization.  
IMDG: International Maritime Code for Dangerous Goods.  
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.