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

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ASTRAL POOL

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

#### 1.1 Product identifier.

Product Name: ASTRAL Action 10

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

Desinfectant-algaecide-flocculant

#### 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:

#### **SECTION 2: HAZARDS IDENTIFICATION.**

### 2.1 Classification of the mixture.

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

Acute Tox. 4: Harmful if swallowed.

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

STOT SE 3: May cause respiratory irritation.

#### 2.2 Label elements.

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

Pictograms:







# Signal Word:

# Danger

H statements:

H302 Harmful if swallowed.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

H410 Very toxic to aquatic life with long lasting effects.

P statements:

P261 Avoid breathing dust.

P271 Use only outdoors or in a well-ventilated area.
P270 Do no eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash hands thoroughly after handling.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P102 Keep out of reach of children.

P405 Store locked up.

P273 Avoid release to the environment.

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P391 Collect spillage.

P501 Dispose of contents/container in accordance with applicable regulations.

**EUH statements:** 

EUH031 Contact with acids liberates toxic gas.

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

Contains: symclosene Aluminiumsulfate

### 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.

Not Applicable.

#### 3.2 Mixtures.

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

		(*)Classification - Regulation No 1272/2008		
Identifiers	Name	Concentrate	Classification	specific concentration limit
Index No: 613-031- 00-5 CAS No: 87-90-1 EC No: 201-782-8	symclosene	80 - 100 %	Acute Tox. 4 *, H302 - Aquatic Acute 1, H400 - Aquatic Chronic 1, H410 - Eye Irrit. 2, H319 - Ox. Sol. 2, H272 - STOT SE 3, H335	,:
CAS No: 10043-01-3 EC No: 233-135-0 Registration No: 01- 2119531538-36-XXXX	Aluminiumsulfate	3 - 10 %	Eye Dam. 1, H318	-
Index No: 005-007- 00-2 CAS No: 10043-35-3 EC No: 233-139-2 Registration No: 01- 2119486683-25-XXXX	boric acid	0.3 - 5.5 %	Repr. 1B, H360FD	Repr. 1B, H360FD: C ≥ 5,5 %
CAS No: 108-80-5 Registration No: 01- 2119480421-45-XXXX	cyanuric acid	1 - 10 %	-	-
CAS No: 7758-99-8 EC No: 231-847-6	copper sulphate pentahydrate	1 - 10 %	Acute Tox. 4 *, H302 - Aquatic Acute 1, H400 - Aquatic Chronic 1, H410 - Eye Irrit. 2, H319 - Skin Irrit. 2, H315	-

<sup>(\*)</sup> The complete text of the H phrases is given in section 16 of this Safety Data Sheet.

<sup>\*</sup> See Regulation (EC) No. 1272/2008, Annex VI, section 1.2.

<sup>[1]</sup> Substance with a Community workplace exposure limit (see section 8.1).

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#### **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

If wearing contact lenses, remove them. 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.

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

Irritant Product, repeated or prolonged contact with skin or mucous membranes can cause redness, blisters or dermatitis, inhalation of spray mist or particles in suspension may cause irritation of the respiratory tract, some symptoms may not be immediate. Can cause allergic reactions.

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.**

The product does not present any particular risk in case of fire.

#### 5.1 Extinguishing media.

### Recommended extinguishing methods.

Extinguisher powder or  $CO_2$ . 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 mixture.

#### 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.

-Continued on next page.-

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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 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)::

		Qualifying quantity (tonnes) for the application of	
Code	Description	Lower-tier requirements	Upper-tier requirements
E2	ENVIRONMENTAL HAZARDS - Hazardous to the Aquatic Environment in Category Chronic 2	200	500

### 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. Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Туре	Value
	DNEL	Dermal, Long-term, Local effects	10 (mg/kg)
Aluminiumsulfate	(Workers)		
N. CAS: 10043-01-3	DNEL (General	Oral, Long-term, Systemic effects	5 (mg/kg)
N. CE: 233-135-0	population)		
N. CL. 233-133-0	DNEL	Dermal, Long-term, Systemic effects	1,8
	(Workers)		(mg/m3)
boric acid	DNEL	Inhalation, Long-term, Systemic effects	8,3
N. CAS: 10043-35-3	(Workers)		(mg/m³)
N. CE: 233-139-2			

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

Concentration levels PNEC:

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Name	Details	Value
Aluminiumsulfate	Water (freshwater)	34,6 (mg/kg)
N. CAS: 10043-01-3	Sediment (marine water)	3,46 (mg/kg)
N. CE: 233-135-0	Soil	33,1 (mg/kg)

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

CAS: 87-90-1

TLV TWA - 0.5 ppm (1.5 mg/m3) Cl gas TLV STEL - 1 ppm (3.0 mg/m3) Cl gas

CAS: 10043-01-3 TLV TWA - 2 mg/m3 (Al) **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.

Concentration:	100 %			
Uses:	Desinfectant-algaecide-flocculant			
Breathing protect				
PPE:	Filter mask for protection against gases and particles.			
Characteristics:	«CE» marking, category III. The mask must have a wide field of vision and an anatomically designed form in order to be sealed and watertight.			
CEN standards:	EN 136, EN 140, EN 405			
Maintenance:	Should not be stored in places exposed to high temperatures and damp environments before use. Special attention should be paid to the state of the inhalation and exhalation valves in the face adaptor.  Read carefully the manufacturer's instructions regarding the equipment's use and maintenance. Attach			
Observations:	the necessary filters to the equipment according to the specific nature of the risk (Particles and aerosols: P1-P2-P3, Gases and vapours: A-B-E-K-AX), changing them as advised by the manufacturer.			
Filter Type needed:	A2			
Hand protection:				
PPE:	Protective gloves against chemicals.			
Characteristics:	«CE» marking, category III.			
CEN standards:	EN 374-1, En 374-2, EN 374-3, EN 420			
Maintenance:	Keep in a dry place, away from any sources of heat, and avoid exposure to sunlight as much as possible. Do not make any changes to the gloves that may alter their resistance, or apply paints, solvents or adhesives.			
Observations:	Gloves should be of the appropriate size and fit the user's hand well, not being too loose or too tight.  Always use with clean, dry hands.			
Material:	PVC (polyvinyl chloride) Breakthrough time (min.): Material thickness (mm): 0,35			
Eye protection:				
	ndled correctly, no individual protection equipment is necessary.			
Skin protection:				
PPE:	Protective clothing.			
Characteristics:	«CE» marking, category II. Protective clothing should not be too tight or loose in order not to obstruct the user's movements.			
CEN standards:	EN 340			
Maintenance:	In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.			
Observations:	The protective clothing should offer a level of comfort in line with the level of protection provided in terms of the hazard against which it protects, bearing in mind environmental conditions, the user's level of activity and the expected time of use.			
PPE:	Work footwear.			
Characteristics:	«CE» marking, category II.			
CEN standards:	EN ISO 13287, EN 20347			
Maintenance:	This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people.			
Observations:	Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident			

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### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.**

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

Appearance:Tablets Colour: White anb blue Odour:Similar to bleach Odour threshold:N.A./N.A.

pH:2,1 - 3 (1%)

Melting point: > 230 °C descompone °C Boiling Point: N.A./N.A.

Flash point: > 60 °C
Evaporation rate: N.A./N.A.
Inflammability (solid, gas): > 250 °C
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.

Vapour pressure: N.A./N.A. Vapour density:N.A./N.A. Relative density:N.A./N.A. Solubility:N.A./N.A. 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: No

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.

Contact with acids liberates toxic gas.

#### 10.2 Chemical stability.

Unstable in contact with:

- Bases.

## 10.3 Possibility of hazardous reactions.

Warning! Do not use together with other products. May release dangerous gases (chlorine). Neutralization can occur on contact with bases.

#### 10.4 Conditions to avoid.

- Avoid contact with bases.

#### 10.5 Incompatible materials.

Avoid the following materials:

- Bases.

### 10.6 Hazardous decomposition products.

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

- Corrosive vapors or gases.

### **SECTION 11: TOXICOLOGICAL INFORMATION.**

IRRITANT PREPARATION. Splatters in the eyes can cause irritation.

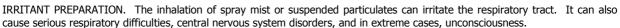
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### 11.1 Information on toxicological effects.

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.

Splatters in the eyes can cause irritation and reversible damage.

### Toxicological information about the substances present in the composition.

Name		Acute toxicity			
Name	Туре	Test	Kind	Value	
	Oral	LD50 [1] EPA C	Rat	490 mg/kg [1]	
symclosene	Dermal	LD50	Rabbit	>2000 mg/kg [1]	
CAS No: 87-90-1 EC No: 201-782-8	Inhalation	[1] EPA C	)PP 81-2		
	Oral	LD50	Rat	>2000 mg/kg [1]	
Aluminiumsulfate	Dermal	[1] OCDE LD50	Rabbit	>5000 mg/kg [1]	
		[1] OCDE	402		
CAS No: 10043-01-3	Inhalation				
	Oral	LD50 LD50	Rat Rat	3500-4100 mg/kg 2660 mg/kg bw [1]	
boric acid			, Journal of the 266, 1945	American Medical Association. Vol.	
	Dermal	LD50	Rabbit	>2000 mg/kg	
CAS No: 10043-35-3 EC No: 233-139-2	Inhalation	LC50	Rat	> 2 mg/l	
	Oral	LD50	Rat	> 5000 mg/kg	
cyanuric acid	Dermal	LD50	Rat	> 5000 mg/kg	
CAS No: 108-80-5 EC No:	Inhalation	LC50	Rat	> 5.25 mg/l	

a) acute toxicity;

Product classified:

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

b) skin corrosion/irritation;

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

c) serious eye damage/irritation;

Product classified:

Eye irritation, Category 2: Causes serious eye irritation.

d) respiratory or skin sensitisation;

Not conclusive data for classification.

e) germ cell mutagenicity;

Not conclusive data for classification.

f) carcinogenicity;

Not conclusive data for classification.

g) reproductive toxicity;

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

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h) STOT-single exposure;

Product classified:

Specific target organ toxicity following a single exposure, Category 3:

i) STOT-repeated exposure;

Not conclusive data for classification.

j) aspiration hazard;

Not conclusive data for classification.

## **SECTION 12: ECOLOGICAL INFORMATION.**

### 12.1 Toxicity.

Name		Ecotoxicity			
Name	Туре	Test	Kind	Value	
	Fish	LC50	Fish	0.32 mg/l (96h)	
symclosene	Aquatic invertebrates	LC50	Daphnia	0.21 mg/l (48h)	
CAS No: 87-90-1 EC No: 201-7	782-8 Aquatic plants	5			
	Fish	LC50	Fish	> 1000 mg/l (96 h)	
Aluminiumsulfate	Aquatic invertebrates	LC50	Daphnia	> 160 mg/l (48h)	
CAS No: 10043-01-3 EC No: 233-2	Aquatic plants	5			
		LC50 LC50	Fish Fish	74 mg/l (96 h) 487 mg/l (96 h) [1]	
	Fish	Boron, Mand Coho 373. Ham to Three	[1] Hamilton, S.J., and K.J. Buhl 1990. Acute Toxicity of Boron, Molybdenum, and Selenium to Fry of Chinook Salmon and Coho Salmon. Arch.Environ.Contam.Toxicol. 19(3):366-373. Hamilton, S.J. 1995. Hazard Assessment of Inorganics to Three Endangered Fish in the Green River, Utah. Ecotoxicol.Environ.Saf. 30(2):134-142		
boric acid	Aquatic invertebrates	LC50 LC50 [1] Gersic Chronic T Using Bor M.A., and of Boric A	Daphnia Crustacean ch, F.M. 1984. Evalua oxicity Test Method for ic Acid. Environ.Toxic	133 mg/l (48 h) 180 mg/l (48 h) [1] tion of a Static Renewal or Daphnia magna Straus col.Chem. 3(1):89-94. Lewis, Acute and Chronic Toxicities a Straus.	
CAS No: 10043-35-3 EC No: 233-3	Aquatic plants				
	Fish	LC50	Fish	2100 mg/l (96 h)	
cyanuric acid	Aquatic invertebrates				
CAS No: 108-80-5 EC No:	Aquatic plants	EC50	Algae	3780 mg/l (96 h)	

# 12.2 Persistence and degradability.

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

### 12.3 Bioaccumulative potencial.

Information about the bioaccumulation of the substances present.

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Name	Bioaccumulation			
Name	Log Pow	BCF	NOECs	Level
cyanuric acid	0,61	_	_	Very low
N. CAS: 108-80-5 EC No:	0,01	_	_	very low

#### 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

<u>Sea</u>: Transport by ship: IMDG. Transport documentation: Bill of lading <u>Air</u>: Transport by plane: ICAO/IATA. Transport document: Airway bill.

# 14.1 UN number.

UN No: UN3077

### 14.2 UN proper shipping name.

Description:

ADR: UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS SYMCLOSENE), 9, PG III, (E) IMDG: UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS SYMCLOSENE), 9, PG III, MARINE

POLLUTANT

ICAO: UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CONTAINS SYMCLOSENE), 9, PG III

### 14.3 Transport hazard class(es).

Class(es): 9

## 14.4 Packing group.

Packing group: III

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#### 14.5 Environmental hazards.

Marine pollutant: Yes



Dangerous for the environment

#### 14.6 Special precautions for user.

Labels: 9



Hazard number: 90 ADR LQ: 5 kg IMDG LQ: 5 kg ICAO LQ: 30 kg B

Provisions concerning carriage in bulk ADR:

VC1 Carriage in bulk in sheeted vehicles, sheeted containers or sheeted bulk containers is permitted.

VC2 Carriage in bulk in closed vehicles, closed containers or closed bulk containers is permitted.

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

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 mixture.

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): E2

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.

### 15.2 Chemical safety assessment.

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

### **SECTION 16: OTHER INFORMATION.**

Complete text of the H phrases that appear in section 3:

H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

H360FD May damage fertility. May damage the unborn child.

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H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

#### Classification codes:

Acute Tox. 4 [Oral]: Acute toxicity (Oral), Category 4

Aquatic Acute 1 : Acute toxicity to the aquatic environment, Category 1 Aquatic Chronic 1 : Chronic effect to the aquatic environment, Category 1

Eye Dam. 1 : Serious eye damage, Category 1 Eye Irrit. 2 : Eye irritation, Category 2 Ox. Sol. 2 : Oxidising solid, Category 2 Repr. 1B : Reproductive toxicant, Category 1B Skin Irrit. 2 : Skin irritant, Category 2

STOT SE 3: Specific target organ toxicity following a single exposure, Category 3

Sections changed compared with the previous version:

8,16

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
87-90-1	symclosene	Registered
10043-01-3	Aluminiumsulfate	Registered
10043-35-3	boric acid	Registered
108-80-5	cyanuric acid	Registered
7758-99-8	copper sulphate pentahydrate	

#### Abbreviations and acronyms used:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

BCF: Bioconcentration factor.

CEN: European Committee for Standardization.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be

considered a tolerable minimum.

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not

anticipated.

EC50: Half maximal effective concentration.

PPE: Personal protection equipment.

IATA: International Air Transport Association.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Code for Dangerous Goods.

LC50: Lethal concentration, 50%.

LD50: Lethal dose, 50%.

Log Pow: Logarithm of the partition octanol-water.

NOEC: No observed effect concentration.

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are

not expected in the environmental compartment.

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.

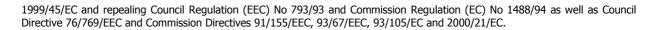
The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive

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 Revision date: 16/01/2017
 Print date: 16/01/2017



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.

**ASTRAL**POOL