

SAFETY DATA SHEET

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

ASTRAL 100 gr salt electrolysis cartridge flocculant



Version: 1
Revision date: 11/01/2017

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

1.1 Product identifier.

Product Name: ASTRAL 100 gr salt electrolysis cartridge flocculant

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

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: fds@inquide.com
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 mixture.

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

Eye Dam. 1 : Causes serious eye damage.

2.2 Label elements.

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

Pictograms:



Signal Word:

Danger

H statements:

H318 Causes serious eye damage.

P statements:

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- 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.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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 a doctor

Contains:
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:

| Identifiers | Name | Concentrate | (*)Classification - Regulation (EC) No 1272/2008 | |
|--|------------------|-------------|---|------------------------------------|
| | | | Classification | specific concentration limit |
| CAS No: 10043-01-3 EC No: 233-135-0 Registration No: 01- 2119531538-36-XXXX | Aluminiumsulfate | 3 - 100 % | Eye Dam. 1, H318 | - |

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

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.

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.

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.

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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 CO₂. 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.

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.

The product is not affected by Directive 2012/18/EU (SEVESO III).

7.3 Specific end use(s).

None in particular.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

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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 | Type | Value |
|--|---------------------------|-------------------------------------|----------------|
| Aluminiumsulfate N. CAS: 10043-01-3 N. CE: 233-135-0 | DNEL (Workers) | Dermal, Long-term, Local effects | 10 (mg/kg) |
| | DNEL (General population) | Oral, Long-term, Systemic effects | 5 (mg/kg) |
| | DNEL (Workers) | Dermal, Long-term, Systemic effects | 1,8 (mg/m3) |

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:

| Name | Details | Value |
|--|-------------------------|--------------|
| Aluminiumsulfate N. CAS: 10043-01-3 N. CE: 233-135-0 | Water (freshwater) | 34,6 (mg/kg) |
| | Sediment (marine water) | 3,46 (mg/kg) |
| | 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: 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: | Flocculant | | |
| Breathing protection: | | | |
| If the recommended technical measures are observed, no individual protection equipment is necessary. | | | |
| Hand protection: | | | |
| PPE: | Work gloves. | | |
| Characteristics: | «CE» marking, category I. | | |
| 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.): | > 480 |
| | | Material thickness (mm): | 0,35 |
| Eye protection: | | | |
| 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. | | |
| 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 | | |





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| | |
|------------------|--|
| 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 |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.

Appearance: Tablets
Colour: White cream
Odour: Odourless
Odour threshold: N.A./N.A.
pH: 2 - 3 (1 %)
Melting point: 115 °C
Boiling Point: 650 °C
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: N.A./N.A.
Solubility: N.A./N.A.
Liposolubility: Poco soluble en alcohol
Hydrosolubility: 45% (20 °C)
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 applicable

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.

The product does not present hazards by their reactivity.

10.2 Chemical stability.

Stable under the recommended handling and storage conditions (see section 7).

10.3 Possibility of hazardous reactions.

The product does not present possibility of hazardous reactions.

10.4 Conditions to avoid.

Avoid any improper handling.

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10.5 Incompatible materials.

Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

10.6 Hazardous decomposition products.

No decomposition if used for the intended uses.

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 about the substances present in the composition.

| Name | Acute toxicity | | | |
|--|----------------|--------------|--------|-----------------|
| | Type | Test | Kind | Value |
| Aluminiumsulfate | Oral | LD50 | Rat | >2000 mg/kg [1] |
| | | [1] OCDE 401 | | |
| | Dermal | LD50 | Rabbit | >5000 mg/kg [1] |
| | | [1] OCDE 402 | | |
| CAS No: 10043-01-3 EC No: 233-135-0 | Inhalation | | | |

a) acute toxicity;

Not conclusive data for classification.

b) skin corrosion/irritation;

Not conclusive data for classification.

c) serious eye damage/irritation;

Product classified:

Serious eye damage, Category 1: Causes serious eye damage.

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;

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.

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| Name | Ecotoxicity | | | |
|--|-----------------------|------|---------|--------------------|
| | Type | Test | Kind | Value |
| Aluminiumsulfate CAS No: 10043-01-3 EC No: 233-135-0 | Fish | LC50 | Fish | > 1000 mg/l (96 h) |
| | Aquatic invertebrates | LC50 | Daphnia | > 160 mg/l (48h) |
| | Aquatic plants | | | |

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 of the substances present.

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.

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

14.1 UN number.

Transportation is not dangerous.

14.2 UN proper shipping name.

Description:

ADR: Transportation is not dangerous.

IMDG: Transportation is not dangerous.

ICAO: Transportation is not dangerous.

14.3 Transport hazard class(es).

Transportation is not dangerous.

14.4 Packing group.

Transportation is not dangerous.

14.5 Environmental hazards.

Transportation is not dangerous.

14.6 Special precautions for user.

Transportation is not dangerous.

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

Transportation is not dangerous.

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.

The product is not affected by Directive 2012/18/EU (SEVESO III).

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:

H318 Causes serious eye damage.

Classification codes:

Eye Dam. 1 : Serious eye damage, Category 1

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 |
|------------|------------------|------------|
| 10043-01-3 | Aluminiumsulfate | Registered |

Abbreviations and acronyms used:

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.

LC50: Lethal concentration, 50%.

LD50: Lethal dose, 50%.

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

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.

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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.