OXYGON

SWIMMING POOL · WATER TREATMENT · HEATING · COOLING



OXYGON Κροκιδωτικό Πισίνας

Pool flocculant

Operation & Use Manual

Oxygon codes: 111.10.11-10lt | 111.10.11-20lt

Scan for pool chemicals

www.oxygon.gr

OXYGON — Karamaouna St., N. Rysio, 57001 Thessaloniki, Greece
Tel: +30 2310 810 000 | info@oxygon.gr | www.oxygon.gr

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1. Safety Warnings

Read these instructions carefully before every use. The product is **not classified as hazardous** under CLP (EC) 1272/2008 and is intended **exclusively for professional users**. The absence of a classification does not mean the absence of risk: this is an **acidic solution (pH 3.5 – 4)**. Always consult the label and the SDS before application.

ACIDIC SOLUTION — AVOID CONTACT

The product has a pH of 3.5 – 4. Although the mixture is not classified as an irritant, prolonged contact with the skin or the eyes may cause irritation, particularly with the concentrated product. Wear protective gloves and goggles when handling, and rinse immediately in the event of contact.

DO NOT MIX WITH OTHER CHEMICALS

NEVER mix the product directly with chlorine, sodium hypochlorite, alkaline correctors or other maintenance chemicals. As an acidic solution, direct contact with chlorinating or alkaline products may cause a violent reaction. Each chemical is diluted and added **separately** to the pool water.

SLIP HAZARD ON THE POOL FLOOR

After application, the flocs that settle form a **slippery layer** on the pool floor. The pool remains **closed to bathers** from the moment of addition until vacuuming is complete and clarity has been restored.

DO NOT BREATHE SPRAY

Avoid breathing spray or mist during dilution. Ensure adequate ventilation in the storage and application area. In enclosed plant rooms use local extraction.

ADD THE PRODUCT TO THE WATER

Always add the product **to the water** and never the water to the concentrated product. Use plastic mixing containers only — not metal ones, because of the acidic nature of the solution.

Required Personal Protective Equipment (PPE)

Hands	Chemical-resistant gloves (EN ISO 374)
Eyes	Protective goggles with integral side shields (EN 166)
Body	Protective clothing against chemicals (EN 13034)
Feet	Chemical-resistant safety footwear (EN ISO 20345)
Respiratory	Not required under normal conditions; mask with type A2 filter only where ventilation is inadequate

> **Note:** Because the mixture is not classified, the product does not have a child-resistant closure or a tactile warning triangle — neither is required by Annex II to CLP. It is nevertheless kept out of the reach of children (P102).

2. Product Description

OXYGON Pool Flocculant is a liquid product based on **polyaluminium chloride (PAC)**, formulated to remove the turbidity that the filter cannot retain. It aggregates the microscopic suspended particles into larger masses, which **settle on the pool floor** and are removed by vacuuming.

It is used **correctively**, when the water has lost its clarity and filtration alone is not sufficient — typically after heavy use, after prolonged turbidity, or when a pool is brought back into service.

Field of application

- Private and public swimming pools
- Hotel pools and spa installations
- Pools with persistent turbidity that does not clear with filtration
- Pools with sand filters, where fine particles pass through the filter medium
- Pools brought back into service after a winter shutdown or extensive contamination

Available packaging

Oxygon codes	111.10.11-10lt · 111.10.11-20lt
Packaging	Plastic container 10 L and 20 L
Trade name	OXYGON Pool Flocculant
Category	Flocculant / water clarifier

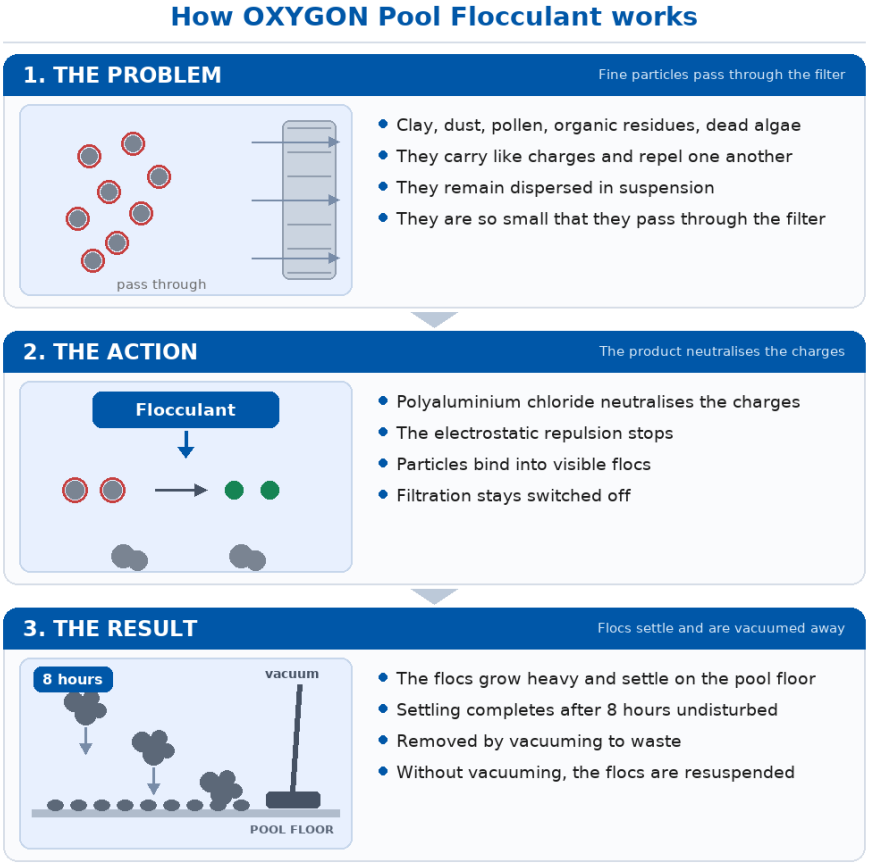
> **Note:** The Technical Data Sheet also lists 1 L and 5 L packs. The packs currently available are the 10 L and 20 L. Contact the sales department for availability.

3. How It Works — Flocculation & Settling Mechanism

The active ingredient of the product is **polyaluminium chloride (PAC)**, an aluminium salt which hydrolyses in water and forms polymeric compounds with a strong flocculating action.

The microscopic particles that cloud the water — organic residues, clay, dust, pollen, dead algae — carry **like electrical charges** on their surface and therefore repel one another, remaining dispersed in suspension. They are so small that they pass freely through the filter medium.

The product **neutralises these charges**. Without the electrostatic repulsion, the particles aggregate into **visible flocs** which, because of their weight, **settle on the pool floor**. For this reason **filtration stays switched off** during the application and for 8 hours afterwards — circulation would keep the flocs in suspension and prevent them from settling.



Mechanism of action: charge neutralisation, aggregation of the particles and their settling on the pool floor

Important: The flocculant does not disinfect and does not replace chlorine. It does not eliminate the cause of the turbidity — it gathers the particles so that they settle and can be removed by vacuuming. **If the pool floor is not vacuumed afterwards, the flocs will be resuspended** as soon as the circulation is restarted and the turbidity will return.

4. When It Is Needed — Identifying the Problem

Cloudy water can have different causes. The flocculant effectively addresses only some of them; correct diagnosis prevents unnecessary use and needless closure of the pool.

Indication	Probable cause	Is flocculant indicated?
Persistent turbidity that does not clear with filtration	Very fine particles passing through the filter	Yes — the typical application case
Turbidity after a dust storm or heavy rain	Clay and atmospheric deposition	Yes — the ideal case
Turbidity after algae treatment	Dead algae in suspension	Yes, once the algaecide treatment is complete
Pool brought back into service after the winter	Accumulated sediment and organic load	Yes, after initial chlorination
Slight dullness with otherwise correct readings	Organic load from bathers	Pool Brightener is preferable — it does not require closing the pool
Green water with visible algae growth	Active algae colonisation	No — algaecide and chlorination are required first
Brown or rust discolouration, stains on surfaces	Metals (iron, copper, manganese)	No — a sequestrant is required (Mineral Protect)
Whitish turbidity with very high hardness	Calcium salt precipitation	No — water balance adjustment is required

Before each application, check that the **pH is within 7.2 – 7.6**. In unbalanced water the flocculation does not go to completion, the flocs remain fine and the turbidity reappears after vacuuming.

Filter check: Before attributing turbidity to the water, confirm that the filter is working correctly and that the circulation time is adequate for the pool volume. A clogged or undersized filter cannot be compensated for with chemicals.

5. Technical Characteristics

Form	Clear liquid
Colour	Colourless
Odour	Odourless
pH (as supplied)	3.5 – 4
Density at 20 °C	1.0 – 1.05 g/cm³
Solubility in water	Fully miscible
Flash point	Not determined (not classified as flammable)
Active ingredient	Polyaluminium chloride (PAC)
CAS No.	1327-41-9
EC No.	215-477-2
Active content	> 2.5 – ≤ 5 %
UFI	Not required — the mixture is not classified
Storage	Protect from high humidity
Use category	For professional use only

CLP Classification — Regulation (EC) 1272/2008

Label element	Requirement	Rationale
Classification	None	The mixture does not meet the classification criteria (SDS §2.1)
Pictograms	None	Not applicable — there is no classification
Signal word	None	Not applicable — there is no classification
Hazard statements (H)	None	Not applicable — there is no classification
Precautionary statements (P)	P102	Keep out of reach of children (SDS §2.2)

Why there is no UFI: Annex VIII to the CLP Regulation requires a UFI code and notification to the Poison Centres (PCN) only for mixtures **classified** for health or physical hazards. The product is not classified and is therefore not subject to that obligation. **Note the distinction:** the active ingredient carries a classification of its own (Skin Irrit. 2, Eye Irrit. 2), but at a content of > 2.5 – ≤ 5 % the mixture does not reach the generic concentration limits (10 %) and those statements are not carried over to the label.

6. Dosage

Dosages are calculated on the basis of the **total water volume** of the pool. They are divided into an initial (start-up) dose and a maintenance dose.

Initial dose (first application)

Applied when the product is used for the first time in a given water volume, when a pool is brought back into service, or in cases of heavy turbidity: **2.0 litres per 100 m³**.

Maintenance dose

For periodic application in pools with recurring turbidity: **1.2 litres per 100 m³, every 7 days**. The maintenance dose is applied only where the turbidity calls for it — it is not a mandatory weekly treatment.

Pool volume	Initial dose	Maintenance dose (every 7 days)
25 m³	500 ml	300 ml
50 m³	1.0 L	600 ml
75 m³	1.5 L	900 ml
100 m³	2.0 L	1.2 L
150 m³	3.0 L	1.8 L
200 m³	4.0 L	2.4 L
300 m³	6.0 L	3.6 L
500 m³	10.0 L	6.0 L

Volume calculation: For a rectangular pool, Volume (m³) = Length × Width × Average depth (in metres). For a circular pool, Volume = π × (Diameter ÷ 2)² × Average depth.

DO NOT EXCEED THE DOSAGE

Overdosing does not improve clarification — it **makes it worse**. An excessive quantity of flocculant may **restabilise** the particles instead of aggregating them, resulting in persistent turbidity that does not settle. It also consumes alkalinity and lowers the pH. Recovery requires pH adjustment, backwashing and partial water renewal.

7. Application Instructions

POOL CLOSED — FILTRATION OFF

Application takes place with the pool **empty of bathers** and with the **filtration switched off**. The water must remain still for 8 hours so that settling can be completed. The pool stays closed until vacuuming of the pool floor is complete.

Step-by-step procedure

1. Wear the required PPE (gloves, goggles, protective clothing).
2. Confirm that there are **no bathers** in the pool and that it will remain closed.
3. Check and adjust the **pH to 7.2 – 7.6** before application.
4. **Stop the filtration.** The equipment stays switched off throughout the settling period.
5. Calculate the required quantity based on the pool volume (see Section 6).
6. Measure the quantity and add it to a **plastic container of clean water**. Always add the product to the water — never the water to the product.
7. Spread the solution **around the perimeter** of the pool surface so that it disperses evenly.
8. Leave the water **still for 8 hours**. Do not start the circulation — it will prevent the flocs from settling.
9. After the 8 hours, **vacuum the pool floor slowly** to remove the masses that have settled. Preferably vacuum **to waste**, so that the flocs do not pass through the filter.
10. Restart the filtration and carry out a **backwash**.
11. Top up the water that has been removed and re-check the pH and residual chlorine before allowing the pool to be used.

In cases of very heavy turbidity the initial dose may be repeated after 24 hours, provided the pool floor has been vacuumed, the filter backwashed and the pH checked. The dose is indicative and is adjusted to the characteristics of the pool and the climate.

Timing: Prefer the evening hours. Settling is completed overnight, so that vacuuming can be done the following morning and the pool is available by midday.

8. Compatibility with Other Chemicals

OXYGON Pool Flocculant is compatible with the usual pool maintenance chemicals, **provided they are added separately to the water and spaced apart in time**. Direct mixing of concentrated products is prohibited. Because application of the flocculant requires **still water**, it cannot be combined in time with any product that requires circulation.

Product / Substance	Compatibility	Instruction
Chlorine (tablets, granular)	Yes, spaced apart	Never at the same time; the flocculant is acidic and is not mixed with chlorinating products
Sodium hypochlorite (liquid chlorine)	Yes, spaced apart	Never add simultaneously; never mix in the same container
pH minus	Yes, spaced apart	Adjust the pH to 7.2 – 7.6 first and let it stabilise
pH plus	Yes, spaced apart	Adjust the pH first; the flocculant consumes alkalinity
Pool Brightener	Yes, spaced apart	**Never at the same time.** Interval of ≥ 8 hours with circulation in between; the two products require opposite conditions (still water / circulation)
Active oxygen (OxyPool / OxySpa)	Yes, spaced apart	Minimum interval of 8 hours
Sequestrant (Mineral Protect)	Yes, spaced apart	Apply the sequestrant first and allow it to act
Strong oxidising agents	NO	Risk of reaction; never mix directly
Alkaline correctors (concentrated)	NO	Violent neutralisation reaction; never mix directly

SAFE PRACTICE RULE

One chemical at a time. Each product is diluted and added separately to the pool water. An interval of at least 8 hours is observed between two different chemicals, with a pH check in between. The flocculant is applied **last**, once the remaining water parameters have stabilised.

9. Water Checks & Maintenance

The effectiveness of the flocculant depends directly on correct water balance and on the thorough removal of the flocs after settling.

Parameter	Target range	Check frequency
pH	7.2 – 7.6	Before application and after vacuuming
Free chlorine	1.0 – 1.5 mg/L	Daily
Total alkalinity	80 – 120 mg/L	Before each application — the product consumes it
Calcium hardness	200 – 400 mg/L	Monthly
Filter pressure	Up to +0.3 bar above initial	After each backwash

Filter maintenance

The flocs are removed principally by **vacuuming to waste**, not through the filter. If vacuuming is carried out with the water returning to the filter, the filter medium is loaded abruptly and the pressure rises quickly — an immediate backwash is then required.

After each vacuuming and backwash, the water that has been removed must be replaced. Re-check the pH, the alkalinity and the residual chlorine for the new volume of water.

Tip: Record the date and quantity of each application, together with the pH and alkalinity values before and after. The history makes it easier to fine-tune the dosage and to document the maintenance.

10. Troubleshooting

Problem	Probable cause	Action
No visible flocs formed	pH out of range; insufficient dose	Adjust the pH to 7.2 – 7.6 and repeat with the correct dose
The flocs did not settle	The circulation was left running	Stop the filtration and leave the water still for 8 hours
Turbidity returned after vacuuming	Incomplete vacuuming — flocs were resuspended	Repeat the vacuuming slowly and to waste
Water became cloudier immediately afterwards	Floc formation in progress	Normal; leave the water still until settling is complete
Persistent turbidity that does not settle	Overdosing — restabilisation of the particles	Do not add more product; backwash and partially renew the water
The pH dropped noticeably after application	The product is acidic and consumes alkalinity	Expected; adjust the pH and the alkalinity after vacuuming
Filter pressure rose abruptly	Vacuuming was done with the water returning to the filter	Perform a backwash; next time vacuum to waste
No improvement in green water	Active algae growth — wrong product	Apply algaecide and shock chlorination first, then the flocculant
No improvement in brown/rust water	Turbidity caused by metals — wrong product	A sequestrant is required (OxyGuard Mineral Protect)
Slippery pool floor after application	A layer of flocs that has not been removed	The pool remains closed until vacuuming is complete

11. Storage & Handling

- Store in the original container, tightly closed and **upright**.
- Protect from conditions of **high humidity**.
- Keep away from direct sunlight and heat sources.
- Keep away from chlorinating, oxidising and alkaline products.
- Keep out of reach of children and unauthorised persons (P102).
- Smoking, eating and drinking are prohibited in the storage area.
- Do not store in metal containers — acidic solution.
- The prepared solution must not be stored — use within 24 hours.

SEPARATE FROM CHLORINE

Store OXYGON Pool Flocculant in a separate location from chlorine products and from alkaline correctors. In the event of a simultaneous spill, contact between an acidic solution and a chlorinating product may release chlorine gas.

Not covered by Directive 2012/18/EU (SEVESO III). The product is not classified as dangerous for transport — it is not subject to ADR/RID/IMDG/ICAO-IATA as dangerous goods. The general packaging and stowage requirements apply.

12. First Aid

Route of exposure	Actions
Eye contact	Rinse immediately with plenty of cool clean water for at least 10–15 minutes, holding the eyelids open. Remove contact lenses if easy to do. Do not allow rubbing. If irritation persists, seek medical attention.
Skin contact	Remove contaminated clothing. Rinse the skin with plenty of water and soap. Do not use solvents or thinners. If irritation persists, seek medical attention.
Ingestion	Rinse the mouth with water. Do NOT induce vomiting. Keep the casualty at rest. Seek medical attention and show the label or the SDS.
Inhalation	Move the casualty to fresh air, keep warm and at rest. If breathing is irregular or stops, apply artificial respiration and call for medical assistance.

Never give anything by mouth to an unconscious person. In case of doubt, or if symptoms persist, seek medical attention.

POISON CENTRE TELEPHONE

Greece: +30 210 77 93 777 (available 24 hours). In any case of exposure, have the product label and the Safety Data Sheet available. The product does not carry a UFI code, as it is not classified.

13. Spillage, Environment & Disposal

Dealing with a spill

- Wear the PPE listed in Section 1 before approaching the spill.
- Prevent the product from entering drains, sewers and water bodies.
- Contain and collect the liquid with inert absorbent material (sand, earth, vermiculite).
- Collect the residues in suitable closed containers for disposal.
- Clean the area with plenty of water.
- Caution: the liquid is acidic and may attack metal surfaces and floors.

Environment

The product is not classified as hazardous to the environment. According to the Technical Data Sheet, it breaks down within a short period and does not require special treatment for its disposal. Even so, bulk discharge into water bodies is to be avoided, since the local change in pH may affect aquatic organisms.

Disposal

Disposal of the contents and of the container is carried out in accordance with local, regional, national and international regulations, following the provisions of Directive 2008/98/EC on waste management. Vacuuming and backwash water is disposed of in accordance with local regulations for pool water. Empty containers must not be reused for any other purpose.

14. Warranty & Contact Details

OXYGON warrants that the product meets the specifications stated in the Technical Data Sheet (TDS), provided it is kept in its original sealed container and under the prescribed storage conditions.

The warranty does not cover results arising from incorrect dosage, from mixing with incompatible products, from failure to vacuum the pool floor after settling, from improper storage, or from use outside the instructions in this manual. Since conditions differ at every installation, the user must confirm the suitability of the product for the specific application.

Person responsible for placing on the market: **KARAVASILIS STERGIOS & SIA EE — OXYGON**. For technical support, dosage guidance or a copy of the Safety Data Sheet (SDS), contact the technical support department.

Contact Information

Company	OXYGON — Karavasilis Stergios & Sia EE
Headquarters	Karamaouna St., N. Rysio, 57001 Thessaloniki, Greece
Phone	+30 2310 810 000
Technical support	+30 2312 208 240
Poison Centre (GR)	+30 210 77 93 777
email	info@oxygon.gr
website	www.oxygon.gr

ISO Certifications

ISO 9001:2015 Quality Management *EUROCERT*	**ISO 14001:2015** Environmental Management *BQV*	**ISO 45001:2018** Occupational Health & Safety *BQV*
ISO 22301:2019 Business Continuity *EUROCERT*	**ISO 46001:2019** Water Efficiency *BQV*	

Recycling of materials must be carried out in accordance with applicable regulations.