

## Barquat® PQ / PQ-2

# Non-Foaming, Broad-Spectrum Algaecides For Industrial Water and Commercial Pools



## Product Description

Barquat® PQ and PQ-2 non-foaming cationic polymeric quaternary ammonium algaecides also act as a coagulation aid, helping water clarification. Barquat® PQ exhibits a 60% concentration in polyquat, whereas Barquat® PQ-2 exhibits a 50% concentration. Barquat® PQ and PQ-2 show a high degree of efficacy against bacteria and fungi. However, for optimal control in cooling water, Lonza recommends a supplementary oxidiser such as Dantobrom® RW.

At recommended concentrations, Barquat® PQ and PQ-2 algaecides are compatible with materials used in the construction of cooling towers as well as swimming pools and are compatible with most cationic and non-ionic surfactants. However, they are incompatible with anionic surfactants, as they would form a high molecular weight complex with them.

These products are readily soluble in water, enabling the production of the desired end-use formulation. Due to their non-foaming characteristics, there is no need for antifoam.

## Product Benefits

- Effective against planktonic and sessile algae
- Multifunctional product : biodispersion, biocide and clarification
- Helps reduce unpleasant odours
- Helps reduce halogen demand and filter clogging
- Stable in hard water and over a broad pH and temperature range
- Non-foaming, simple to use and formulate
- Synergy with halogens
- Easy to monitor
- Slow acting and non-corrosive

## Application

As an algaecide, it is a highly efficient, broad-spectrum biocide for the treatment of industrial water cooling systems, air washers and commercial swimming pools.

## Available Concentrations

Barquat® PQ	60% Polyquat
Barquat® PQ-2	50% Polyquat

## Active Content

<b>N,N-Dimethyl-2-hydroxypropylammonium chloride polymer</b>	
CAS No.:	25988-97-0
EINECS No.:	not applicable
UN No.:	3082

## Packaging

Net weight/pack sizes available:

- 190 kg Polyethylene drum
- 1000 kg IBC
- Bulk (Roadtanker)– available in Europe only

## Formulation Guidelines

Incompatible with anionic detergents.

## Regulatory Information

Barquat® PQ and PQ-2 algaecides have regulatory approvals in numerous countries and are furthermore being supported through the European Biocidal Product Regulation (BPR) Active Substance Review Program for the following product types:

- PT2 (Usage areas include among others: swimming pools, aquariums, bathing and other waters; air conditioning systems)
- PT11 (Preservatives for liquid-cooling and processing systems)

Please note: not all applications have been registered for all products in every country. We therefore advise that customers should determine whether the product of interest has the necessary individual country permission(s) to place onto the market for their considered application. Lonza representatives can assist you with any enquiries.

Since approvals are regularly being gained, we are constantly updating our records. Full, up-to-date information is available on request.

## EU Specific Registrations

REACH	Pre-registered (Ref. number available on request)
BPR	Supported by Lonza for PT 2, 11

## Antimicrobial Efficacy

Test method	Test Organism	Result	
<b>Bactericidal Activity</b>			
<b>Inhibitory concentration carried out in:</b>		Nutrient Solution CSL	Ringers Solution
Quantitative Suspension Test EN 1276:2009	<i>Staphylococcus aureus</i>	> 500 ppm	> 0.5 ppm
	<i>Pseudomonas aeruginosa</i>	> 500 ppm	> 5.0 ppm
	<i>Cand. Albicans</i>	> 500 ppm	> 50 ppm
	<i>Escherichia coli</i>	> 50 ppm	> 0.5 ppm

## Algaestatic Efficacy

		After 72 hours	
OECD 201 - Certified: Dr U. Noack, Rüdeshheim (D)	<i>Scenedesmus subspicatus</i> CHODAT	EBC50	0.18 ppm
		E $\mu$ C50	0.18 ppm
		EBC0	0.032 ppm
		E $\mu$ C0	0.1 ppm

## Algaecidal Activity

Qualitative growth control in presence of nutrient solution		
A. Kuhl–Certified: Lab CSPE, Basel	<i>Chlorella vulgaris</i>	EC100 5–7 ppm

## Algaestatic/Algaecidal concentration

		Algaestatic conc.	Algaecidal conc
Certified: University of Barcelona	<i>Chlorella vulgaris</i>	0.5 ppm	1.0 ppm

## Specifications

	Barquat® PQ	Barquat® PQ-2
Colour (Apha)	250 max	200 max
Active ingredient (100% minus water content)	59.0–61.0 %	49.0–51.0 %
pH (10% in water)	5.5–8.0	5.5–8.0

## Typical Properties

	Barquat® PQ	Barquat® PQ-2
<b>Physical Properties</b>		
Appearance	Colorless to slightly yellow liquid	
Odour	Odourless to slight smell of ammonia	
Viscosity (Brookfield sp. 2, 10 rpm) at 5°C	1 000–4 000 mPa s	550 mPa s
Viscosity (Brookfield sp. 2, 10 rpm) at 23°C	500–2 000 mPa s	200 mPa s
Average Molecular weight	20 000 g/mol	
Flash point (Abel Pansky cc)	> 100°C	
Surface tension (1% aqueous solution)	56 mN/m	
Freeze thaw stability	Good	
Solubility	Soluble in water	
Setting point	< 5°C	
Foaming property	Non foaming	
Shelf life	2 years when stored in sealed original packing	
<b>Chemical Properties</b>		
Ionogenicity	Cationic	
Compatibility	Compatible with inorganic builders and non-ionic surfactants—not compatible with anionics	

[www.lonza.com](http://www.lonza.com)

[www.lonzawatertreatment.eu](http://www.lonzawatertreatment.eu)

## Technical Service

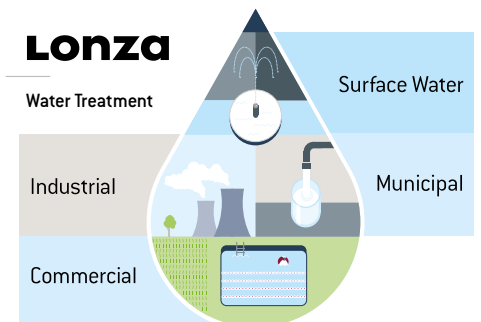
Lonza's technical laboratories can provide a range of testing as part of our customer support program. Please contact your local Lonza sales manager to take advantage of these customized services.

### Risk Assessment and Safe Practices

Lonza professionals have a wide expertise in the field of Health, Safety and Environmental protection. Lonza is committed to providing this expertise to assist you in your choice of product and its suitability for specific applications. Your local Lonza sales manager remains at your disposal should you have any question in this area.

### Health and Safety

Product Safety Data Sheets are supplied upon request. They should be read and understood by all supervisory personnel and employees before using the product. If there is any doubt please contact your local Lonza sales office for advice.



Lonza Ltd

Muenchensteinerstrasse 38

4002 Basel, Switzerland

Tel: +41 61 316 81 11

[watertreatmenteu@lonza.com](mailto:watertreatmenteu@lonza.com)

All trademarks belong to Lonza or its affiliates or to their respective third party owners and are registered in the USA and/or EU. Use biocides safely. Always read the label and product information before use. All product information corresponds to Lonza's knowledge on the subject at the date of publication, but Lonza makes no warranty as to its accuracy or completeness and Lonza assumes no obligation to update it. Product and safety information is intended for use by recipients experienced and knowledgeable in the field, who are capable of and responsible for independently determining the suitability of ingredients for intended uses and to ensure their compliance with applicable law. Proper use of this information is the sole responsibility of the recipient. This information relates solely to the product as an ingredient. It may not be applicable, complete or suitable for the recipient's finished product or application; therefore republication of such information or related statements is prohibited. Information provided by Lonza is not intended and should not be construed as a license to operate under or a recommendation to infringe any patent or other intellectual property right. No claims are made herein for any specific intermediate or end-use application.

© 2016 Lonza