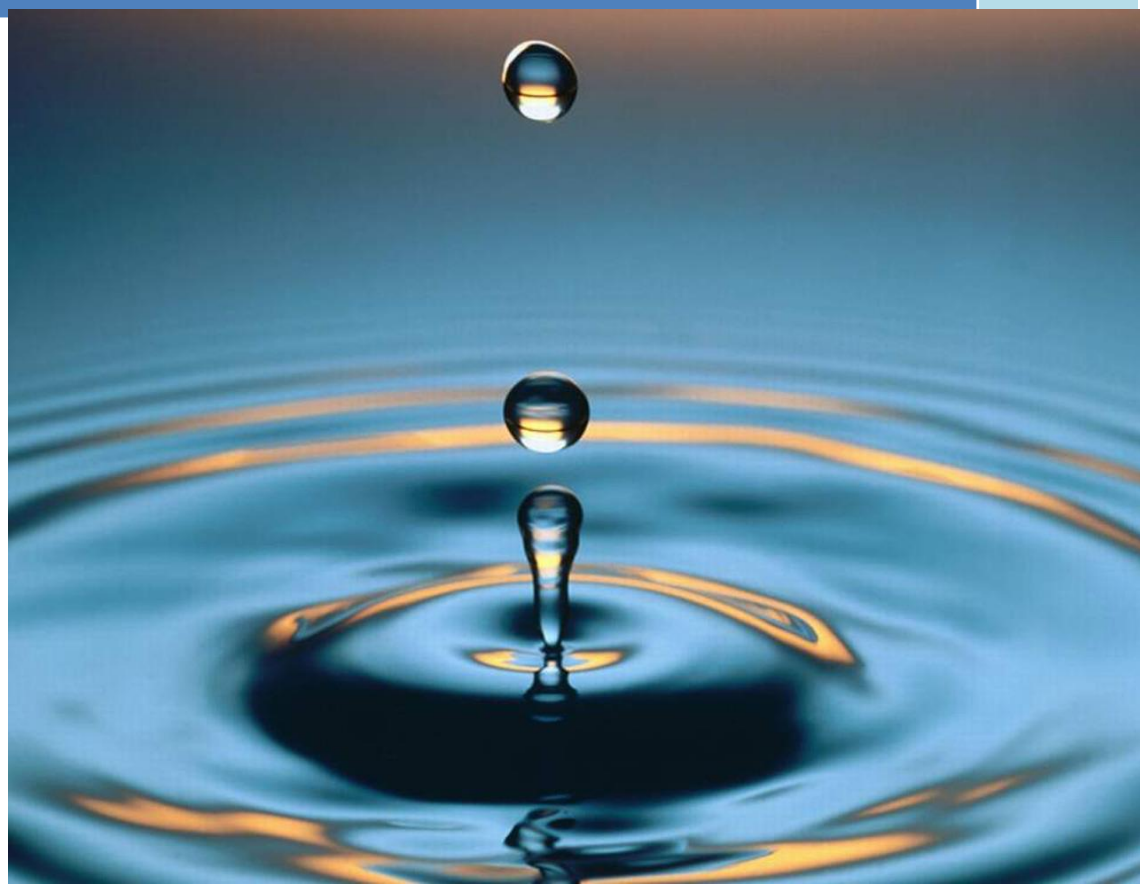




# CHEMICAL PRODUCTS FOR THE TREATMENT OF WATER



## Index

1. Coagulants.....	3
1.1 Synthetic coagulants .....	3
1.2 Inorganic coagulants .....	3
1.3 Specific coagulants .....	4
1.4 Bleaching .....	4
2. pH Adjustment .....	4
3. Oxygen contributor .....	5
4. Flocculants.....	5
5. Biofoods .....	5
6. Defoamers.....	6
7. Polyfunctional .....	6
8. Specific .....	7

## 1. Coagulants

### 1.1 Synthetic coagulants

Coagulating synthetic or organic have presented them as one main advantage substituted wholly or what I can partial classic coagulating mineral (inorganic). It effect keep a Broad pH range and it does not modify, reducing the necessary doses of alkali coadyuvantes bump them in coagulation process (soda, necessary). Also reduce production mud, then be with you improve later stage of dehydration and the improves the clarified effluent.

So it, also be sure to use your regular decanting in secondary sludge digestion biological from both aerobic as anaerobic, favoring rapid sedimentation of sludge and them respecting the bacterial flora present in the same.

	Aspect	Density	Definition	pH
<b>PROFLOC CO 600</b>	Viscous liquid yellow or reddish	~ 1,14 g/cm <sup>3</sup>	Poliamina 50	4 – 6
<b>PROFLOC CO 1000</b>	Viscous liquid yellow or reddish	~ 1,08 g/cm <sup>3</sup>	Polidadmac 40	5 – 7
<b>PROFLOC CO 1500</b>	Viscous liquid yellow or reddish	~ 1,08 g/cm <sup>3</sup>	Polidadmac 20	5 – 7
<b>PROFLOC CO 5200</b>	Brown viscous liquid	~ 1,1 g/cm <sup>3</sup>	Vegetal	2 – 3

### 1.2 Inorganic coagulants

Inorganic mineral salts of polyvalent cations. The most effective are trivalent, particularly Fe (III) and Al (III).

The fine particles or colloids of natural waters are generally negatively charged and wastewater often frequently the same. This is the reason why trivalent iron or aluminum salts are used, since electric charges that confer water balance the electrostatic break.

However, these coagulants due to water hydrolysis suffering, modifying the physico-chemical characteristics thereof, and it is very acidic substances which alter the pH and thus incorporating salts, increasing the conductivity. Thus the pH correction is performed in the same reaction vessel that the coagulation process, thereby establishing the necessary corrections.

	Aspect	Density	pH
<b>CLORURO FERRICO 40%</b>	Brown aqueous solution	~ 1,44 g/cm <sup>3</sup>	Acid
<b>SULFATO FERRICO 45%</b>	Brown aqueous solution	~ 1,60 g/cm <sup>3</sup>	Acid
<b>SULFATO ALÚMINA LIQ.</b>	Slightly viscous clear liquid	~ 1,355 g/cm <sup>3</sup>	Acid
<b>POLICLORURO DE ALUMINIO 18%</b>	Slightly viscous clear liquid	~ 1,365 g/cm <sup>3</sup>	Acid

### 1.3 Specific coagulants

Proquip, S.A. adapts to the needs of each client. So we have a wide range of specific coagulants, for specific applications.

	Aspect	Density	pH
PROFLOC CO 125	Yellow liquid	~ 1,25 g/cm <sup>3</sup>	3,5 ± 1
PROFLOC CO 300	Yellow liquid	~ 1,25 g/cm <sup>3</sup>	3,5 ± 1
PROFLOC CO 800	Yellow liquid	~ 1,3 g/cm <sup>3</sup>	0,5 ± 1
PROFLOC CO MOL	Colorless liquid	~ 1,25 g/cm <sup>3</sup>	3,5 ± 1
PROFLOC FE	Aqueous solution dark brown	~ 1,35 g/cm <sup>3</sup>	0,5 ± 1
PROFLOC CO	Whitish liquid colored dense	~ 1,1 g/cm <sup>3</sup>	2,5 ± 1

### 1.4 Bleaching

For those cases in which the bleaching effluent is required for the discharge, Proquip, SA has a wide range of bleaches easy handling and application, whose performance does not depend on pH alters neither.

They can function alone or in combination with other common products in water treatments, either mineral or synthetic coagulant or high molecular weight flocculants.

	Aspect	Density	pH
PROFLOC CO DEC	Colorless transparent liquid	~ 1,20 g/cm <sup>3</sup>	3,0 – 5
PROFLOC CO FIX	Colorless transparent liquid	~ 1,20 g/cm <sup>3</sup>	2,5 - 6

## 2. pH Adjustment

Acids and bases for pH adjustment as needed.

	Aspect	Density	pH
ÁCIDO CLORHÍDRICO 32/34%	Slightly yellow fuming liquid	~ 1,160 g/cm <sup>3</sup>	Acid
ÁCIDO FOSFORICO 85%	Colorless transparent liquid	~ 1,7 g/cm <sup>3</sup>	Acid
ÁCIDO SULFÚRICO 98/99%	Appearance colorless oily liquid	~ 1,84 g/cm <sup>3</sup>	Acid
HIDROXIDO DE CAL	Fine white powder	0,3 – 0,6 g/cm <sup>3</sup>	Base
CARBONATO DE CAL	Fine white powder	~ 0,894 g/cm <sup>3</sup>	Base
SOSA CAUSTICA 50%	Colorless transparent liquid	~ 1,525 g/cm <sup>3</sup>	Base
PROPUR MAG S	Brown fine powder	~ 1,1 g/cm <sup>3</sup>	Base

### 3. Oxygen contributor

Contribution of oxygen in wastewater subjected to biological processes.

	Aspect	Density	pH
AGUA OXIGENADA 200 VOL.	A less viscous colorless liquid	~ 1,2 g/cm <sup>3</sup>	2 – 4

### 4. Flocculants

Wide range of anionic flocculants, cationic and amphoteric, intended for different applications such as flotation and decantation sludge dewatering.

	Aspect	Density	pH
PROLAMIDA 2540 PN	White granular powder	~ 0,8 g/cm <sup>3</sup>	Solid anionic
PROLAMIDA 3040 L	Whitish liquid	~ 0,103 g/cm <sup>3</sup>	Liquid anionic
PROLAMIDA 855 PN	White granular powder	~ 0,85 g/cm <sup>3</sup>	Solid cationic
PROLAMIDA 300 L	Whitish liquid	~ 1,03 g/cm <sup>3</sup>	Linear cationic liquid
PROLAMIDA 4600 L	Whitish liquid	~ 1,05 g/cm <sup>3</sup>	Reticular cationic
PROLAMIDA 6000 L	Whitish liquid	~ 1,2 g/cm <sup>3</sup>	Aqueous cationic
PROLAMIDA 5000 L	Whitish liquid	1,2 g/cm <sup>3</sup>	Amphoteric

### 5. Biofoods

Wide range based on solid biological nutrient Phosphorous and Nitrogen Flows.

	Aspect
ACETATO SÓDICO LIQ. 30%	Clear, colorless liquid
ACETATO SÓDICO SÓLIDO	White solid granular
CLORURO AMÓNICO LIQ. 20%	Clear, colorless liquid
CLORURO AMÓNICO SÓLIDO	White solid granular
FOSFATO TRISÓDICO LIQ. 15%	Clear, colorless liquid
FOSFATO TRISÓDICO SÓLIDO	White solid granular
UREA LIQ. 20% N	Clear, colorless liquid
UREA SÓLIDO	White solid granular
FOSFATO BIAMÓNICO	White solid granular
PROBIO MQ MEZCLA (P.N)	Clear, colorless liquid
HEXAMETAFOFATO SÓDICO	White powder
METANOL	Clear, colorless liquid
BIO ACTIVADOR PRO	Brown powder

## 6. Defoamers

Defoamers easy to use that inhibit the formation of foam in many industrial sectors.

	Aspect	Density	Definition
<b>PROFOAM S</b>	White liquid	~ 1 g/cm <sup>3</sup>	Silicone base
<b>PROFOAM NS</b>	Yellowish milky liquid	~ 0,90 g/cm <sup>3</sup>	Base oil
<b>PROFOAM BSD</b>	Yellowish transparent liquid	~ 0,85 g/cm <sup>3</sup>	Base alcohol

## 7. Polyfunctional

Solid versatile products to treat wastewater using batch or batch processes.

Contain various regulatory reagent formulation pH, coagulant and flocculants, which cause the product to adapt to a wide variety of wastewater with different pH.

Another advantage is that they require prior preparation and applied directly on the treated effluent

	Aspect	Density
<b>PROFLOC PAC D</b>	Solid brown powder	0,8 – 0,9 g/cm <sup>3</sup>
<b>PROFLOC PAC F</b>	Solid brown powder	0,8 – 0,9 g/cm <sup>3</sup>
<b>PROFLOC PAC S</b>	Solid brown powder	0,8 – 0,9 g/cm <sup>3</sup>
<b>PROFLOC PAC SF</b>	Solid brown powder	0,8 – 0,9 g/cm <sup>3</sup>
<b>PROFLOC PAC IM</b>	Solid brown powder	0,8 – 0,9 g/cm <sup>3</sup>

## 8. Specific

Products for removing stubborn contaminants treated by physical-chemical processes or other conventional or for color removal of effluent when the usual methods fail to completely remove bleach.

Its application is recommended to improve the results obtained by traditional treatments, to treat specific problems or mild.

	Aspect
PROBIO PN	Solid black colored powder
PROBIO CS 80/20	Solid black brown granules
PROBIO CS 50/50	Solid black brown granules
PROBIO RGM	Solid black colored powder
PROFLOC SEP	Solid brown powder
PROFLOC SEP 30/60	Brown granular solid
PROFLOC PER 700	Solid fine powder whitish
PROBENT	Solid brown powder