

Products for Detergency



“We make polymers, we care for the environment”

This means that at **Derypol** we work to establish the market needs, investigate and develop products and look after these needs under a strict quality control.

Our concern for the natural setting has been incorporated into our main objective; using processes and products that respect the environment. This is our way of contributing to the care of the **environment**.

Our **detergency range** polymers are faithful to our objective of innovation and technological advancements in the development of specialized and sophisticated products. They are the result of extensive investigation and are manufactured following the most demanding criteria of excellence and quality. And because of this, we can provide effective ingredients for the detergency world, whilst at the same time complying with all the security requirements and at all times having the maximum respect for the environment.

Dr. Guillem Solé
General Manager



*Products for
detergency*

OPACIFIERS
OPM Series

OPM 502
OPM 504
OPM 544

POLYACRYLATES
PAG Series

PAG 25/N
PAG 25

**RHEOLOGY
MODIFIERS**
Hysuau

Hysuau PHL 30
Hysuau PHL 40
Hysuau PHL 41
Hysuau AQ 1200
Hysuau CC 1000

BIOCIDES
Derycide Series

CD 23 PL
CD 500
CD 100 BR
CD 42

ANTIESCUMS
Antiescum Series

DB 79
DB 96
BS 175



OPACIFIERS

OPM Series

Properties:

The objective of an opacifier is to improve the appearance of the product, even if coloring compounds are used in its formulation. An opacifier must have two main qualities:

1. Opacifying:

It depends on the uniqueness of the opacifier. Polymer composition and particle size are therefore important.

2. Stability:

This refers to the stability within the formulation. Here the opacifier and the formula are the main factors. Stability is a consequence of their mutual compatibility.

Our OPM series guarantees a good opacifying capacity and good stability in a wide range of products formulations; however it is mandatory to check this compatibility at laboratory scale prior to progressing to industrial scale. Derypol has an equipped laboratory and expert staff for this testing in order to check formulation stabilities.

These are the conditions to which the opacified formulations are submitted:

- One week of incubation 45 °C.
- Centrifugation (special cases).



Specifications:

	OPM 502	OPM 504	OPM 544
Appearance	White milky	White milky	White milky
Solids	40%	40%	40%
pH	9,5 – 10,5	2,0 – 3,5	2.0 – 3.5
Viscosity	<100 cps	<100 cps	< 100 cps
Density	1.04 g/cc approx	1.04 g/cc approx	1.04 g/cc approx
Surfactants	Anionic Nonylphenol max. 1,5%	Anionic Nonylphenol free	Anionic Nonylphenol free
Particle Size	190 – 220 nm	200 – 400 nm	200 – 300 nm
INCI	Styrene / acrylates copolymer		

- **Storage:** keep the product within the temperature range of: 5°C - 35°C
- **Shelf life:** 12 months

Preparation and dosage

To get the most effective blend of the opacifier we recommend a previous dilution of the OPM product with water in a proportion of 1:5 or 1:10, and to dilute with between 10 and 20% in an intermediary phase of the addition of the products.

The recommended doses are usually within the range of 0.2 – 1% depending on each particular case.

Applications

Opacifiers from our OPM series are used in a wide range of products in cosmetics and detergency as:

- Skin care products: bath gels and hand soaps
- Cleaning products: liquid detergent

POLYACRYLATES

PAG Series

Tripolyphosphates have been traditionally used as antiredeposition agents or as calcareous inlays inhibitors. The need of reduction or removal of these products has motivated the arising of the acrylic polymers.

These low and medium-low molecular weight polymers replace advantageously phosphates avoiding the inlays due to the water hardness, avoiding in addition the redeposition effect and the grey appearance of the fabrics, by improving the whitening degree.



Properties

Antiredeposition and antiincrustation agent in solid and liquid detergents.

- Antiredeposition effect by replacing the CMC (Carboxymethyl cellulose).
- It is stable at high temperatures.
- It is stable in front of chlorine.
- Easy to handle and to dose.

Specifications

	PAG 25	PAG 25/N
Appearance	Colorless to yellowish liquid	Colorless to yellowish transparent liquid
Solids	>48.5 % (1h, 150°C)	45% ±1 (1h, 150°C)
Viscosity	400 – 1200 cp (25°C)	500 – 1500 cp (25°C 3/30 rpm)
pH	2.0 – 4.0 (20°C)	6.5 – 8.0 (25°C)
Description	Polycarboxylic Acid	Sodium polyacrylate

Shelf life: 6 months

Storage: keep the product within the temperature range of: 10°C - 40°C
(Viscosity increase at lower temperatures)

Applications

- Formulations of solid and liquid detergents.
- Polishers.
- Avoids the "Drop Effect" of the lime in the drained.
- Doses range between 1-4%.



RHEOLOGY MODIFIERS *Hysuau*

PHL Series, AQ1200 y CC1000

PHL Series properties

- Salt tolerant.
- PHL 30 develops the viscosity at pH > 7,5.
- PHL 40 and PHL 41 operate from an acid pH to an alkaline one.
- Provides transparent solutions
- Easy preparation

AQ 1200 Series properties

- Cationic thickener for acid aqueous compositions.
- Compatible with cationic surfactants.
- Improves the dispersion in cold water.

CC 1000 Series properties

- Anionic thickener in emulsion.
- PH range = 7-12.
- Excellent stability with surfactants



Specifications

	PHL 30	PHL 40	PHL 41	AQ 1200	CC 1000
Appearance	White milky			White emulsion	White milky liquid
Actives	22%	20%	20%	55-57%	29% ± 1
Viscosity	< 3000cps	< 3000cps	< 3000cps	3500-7000 cp (1%)	< 100 cps
pH	2,0-4,0	3,5-5,5	4,0-6,0	4.0 – 7.0 (aqueous solution 5g/l)	2,0-5,0
Description	2-propenamamide / Acrylic	2-propenamamide / Sodium acryloyldimethyltaurate copolymer		Cationic acrylamide copolymer in hydrocarbons based emulsion.	Acrylic monomers polymer in aqueous emulsion.
Ionic character	Anionic	Anionic	Anionic	Cationic	Ionic

Applications

- PHL Series is used in formulations which contain salts. It is recommended doses of 3-5 % of commercial product.
- AQ 1200 is indicated to formulate conditioners for clothes (cationic character).
- CC 1000: formulations with high percentages of surfactants



BIOCIDES

Derycide Series

Properties

Derycide CD 23 PL

- It is a biocide resulting from the blend of an organic organobromide compound with isothiazolones (chloride and methyl isothiazolones – CMI/MI) in aqueous solution.
- It possesses a high activity against gram-positive and gram-negative bacteria, fungi and yeast.

Derycide CD 500

- Blend of chloride and methyl concentrated isothiazolones (CMI/MI) stabilized in aqueous solution.
- It possesses a high activity against gram-positive and gram-negative bacteria, fungi and yeast.

Derycide CD 100 BR

- It is a biocide resulting from the active brominated in solid form.
- It possesses a high activity against gram-positive and gram-negative bacteria, fungi and yeast.

Derycide CD 42

- Blend of chloride and methyl isothiazolones (CMI/MI) stabilized in aqueous solution.
- It possesses a high activity against gram-positive and gram-negative bacteria, fungi and yeast.

Specifications

	Derycide CD 23 PL	Derycide CD 500	Derycide CD 100 BR	Derycide CD 42
Appearance	Transparent liquid – slightly hazy	Transparent liquid – slightly hazy	Powder	Transparent liquid
Color	Yellowish	Yellowish	White	Slightly Yellowish
Actives (% p/p)	6.2	14	99 min.	1.5
Moisture (% p/p)	-	-	0.5 max.	-
Density (20°C)	1.04 – 1.08 g/cc	1.25 – 1.35 g/cc	Approx. 1.2 g/cc	1.07 – 1.11 g/cc
pH (20°C)	2 - 4	1- 4	5.7 (sol.1%)	2 - 4
Ashes (sulphates) (% p/p)	n.a.	n.a.	0.5 max.	n.a.
Solubility	Soluble in water and glycol	Soluble in water and glycols of short chain	Soluble in water	Soluble in water and glycol at 20 °C
Odor	Smooth, slightly spicy	Smooth, slightly spicy	Characteristic	Smooth, slightly spicy
Viscosity (20°C)	Lower than 100cPs	Lower than 100cPs	n.a.	Lower than 150cPs
Freezing point	Lower than -5°C	Lower than -10°C	n.a.	Lower than -5°C
Boiling point	98°C Approx.	-	n.a.	98°C Approx.
Flash point	Above its boiling point	Not inflammable	n.a	Not inflammable
INCI Name	2-Bromo-2-Nitropropane-1,3-Diol Methylchloroisothiazolinone Methylisothiazolinone	Methylchloroisothiazolinone Methylisothiazolinone	2-Bromo-2-Nitropropane-1,3-Diol	Methylchloroisothiazolinone Methylisothiazolinone

n.a. : not applicable

Preparation and dosage

Derycide CD 23 PL

It may be added at any time during the manufacturing process. A high level of agitation and mixing is required to allow the product to homogenize within the composition. The pH application range for the product is 8 – 8.5.

Typically the required dosage ranges between 0.05 and 0.1%, based on the total weight of the formulation. As this is a figure that may vary depending on the particular application and the expected results, we recommend testing the product in the laboratory before progressing to industrial scale.

Derycide CD 500

It may be added at any time during the manufacturing process. A high level of agitation and mixing is required to allow the product to homogenize within the composition. The pH application range for the product is 8 – 8.5.

Typically the required dosage ranges between 0.05 and 0.2%, based on the total weight of the formulation.

Derycide CD 100 BR

It may be used as it is or previously diluted in water. The dosage will vary depending on the characteristics and requirements of the composition to preserve. Usually, though, it is within the range 0.01 – 0.02%. Once again we recommend conducting testing in the lab with this biocide and the composition to determine the most adequate dosage and prove that both are compatible.

Derycide CD 42

It may be added at any time during the manufacturing process. A high level of agitation and mixing is required to allow the product to homogenize within the composition. The pH application maximum range for the product is 8 - 8.5.

Typically the required dosage ranges between 0.05 and 0.1%, based on the total weight of the formulation. Previous testing in the lab is advisable.

Applications

Used mainly as a preserving agent in formulations of liquid detergents, softeners and cosmetic products. In general it may be useful in almost any kind of aqueous emulsion.

ANTIFOAM

Antiescum Series



Properties

- DB Series: mixtures of mineral or vegetal oils.
- BS Series: silicone based
- Low viscosity and easy dosage
- Free of nonilphenols

Specifications

	DB 79	DB 96	BS 175
Appearance	Amber- yellow coloured transparent liquid	Amber turbid liquid	Colloidal opaque white suspension
Density	0,8 – 0,9 gr/cm ³	0,80 – 0,90 gr/cm ³	1,0 gr/cm ³
Viscosity	< 50 cps	50 – 1000 cps	800 – 2000 cps
Description	Blend of hydrocarbons and organic copounds	Hydrocarbons mixture	Polydimethylsiloxane emulsion

Applications

- Dose range between 2 and 50 ppm.
- Can be dosed as bulk or diluted in water.
- Control of the formation of foam.
- Operates on a wide range of pH
- Effectively as defoamer (elimination of already formed foam)

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