



Newsletter HomeCare 02/2023

Mirapol[®] Surf N: Natural & Biodegradable Performance Surface Polymer for Long Lasting Cleanliness

α 1.6-D-galactosyl side chains

Introduction

Natural & biodegradable performance ingredients in homecare are a consumer and regulatory driven musthave! Biodegradable/sustainable claims have gone from niche to mainstream in less than a decade. Consumers expect value for their money. Sustainability cannot (anymore) be at expense of Performance.

Key FMCG (Fast Moving Consumer Goods) players voluntarily include ingredients biodegradability as one of their key sustainability commitments. Upcoming REACH polymer regulations will enforce strong biodegradability standards beyond microplastics.

The NEW sustainable Mirapol[®] Surf N Polymers use Solvay's unique hydrophilizing technology to adsorb on surfaces, form a protective, rinse-resistant barrier and facilitate several benefits through water sheeting and soil release mechanisms.

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Mirapol[®] Surf N, sustainable under every angle

Stustainable Chemistry

Derived from guar plant

Sustainable Cleaning

Preserves surfaces from soil adhesion and incrustation, extending their lifespan

Over 90% naturality index	Allows reducing cleaning frequency	
Inherently ultimately biodegrad- able	Allows easier cleaning and reduced detergent usage	Mannose backbone Backbone poly(β-1,4-D-mannosyl)

How does Mirapol[®] Surf N deliver its benefits?

Our polymers absorb on surfaces during the wash and create a protective hydrophilic barrier, resistant to rinsing, which bring several multi-benefits through water sheeting and soil repellency mechanisms.



Suitable surfaces of use and key benefits

Surfaces	Benefits
Ceramic Tiles	Residue-free cleaning
Stainless Steel	Faster drying
Glass	Anti re-soiling
Painted Metals	Substantivity on surface
Plastic	

Frame formulations

Acidic Shower Cleaner

Ingredients	W/W%
Mirapol [®] Surf N	<0,25
Citric Acid	0,25
Cocamidopropyl betaine (Mackam [®] 50ULB)	5,3
Isopropanol	2,0
Propylene Glycol N-Butyl Ether	1,0
Fragrance Herbal Essence (Pollena K1853)	0,2
Preservative	0,1
Aqua	Ad to 100
рН	3,25 - 4,00

Process

- 1) Add Mirapol[®] Surf N to the water by sprinkling, acidify to pH around 4.5 and stir until fully dissolved.
- 2) Weight and add in the rest of the ingredients and mix until the solution is homogeneous.
- 3) Adjust the final pH

Multipurpose Surface Cleaner

Used in next performance tests

Ingredients	W/W%
Mirapol® Surf N	0,2
Citric Acid	0,25
Cocamidopropyl hydroxysultaine, 48 - 51% (Mackam® CBS 50 G)	4,0
Dimethyl Methyl Glutarate	0,5
Isopropanol	3,0
Sodium Citrate Dihydrate	1,0
Fragrance Watterlily, Neroli & White Tea (Pollena C1145)	0,2
Color, Preservative	q. s.
Aqua	Up to 100
pH adjust with citric acid	4,5 - 5,0

Process

- 1) Add Mirapol[®] Surf N to the water by sprinkling, acidify to pH around 4.5 and stir until fully dissolved.
- 2) Weight and add in the rest of the ingredients and mix until the solution is homogeneous.
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Mirapol® Surf N performances

Acidic Shower Cleaner

Bench.	Bench. & Surf-S 110	Bench & Mirapol Surf N	Bench. & Surf-S 900
	Before	Rinsing 0.2 wt %	1.2 Wt %
	After 0.2	Rinsing 0.2	040 7 991

Soil repellency



Soil Release Evaluation



Soil Release Protocol

- 1. Clean tiles with soap and water. Then clean it with ethanol. Allow it to dry
- 2. Scratch the surface with green scrout sponge, (20 back and forth horizontally and 20 back and forth vertically)
- Apply the formulation on the tiles 1 ¹/₂ " X 6" surface area, and use kimwipe to wipe the surface. Then dry them for 30 min
- 4. Rinse tiles at 5L/min for three sequence of back and forth
- 5. Dry tiles for 30 minutes
- 6. Coat the tiles with soil (composed of rapeseed oil, olive oil, and sunflower oil and carbon black) 5 μm soil film thick ness using film applicator on3 1/8" X 6" surface area. Allow for the soil to dry horizontally for 24hrs. (take pic tures of tiles after drying)
- 7. Use Gurdco to clean the soiled tiles for three cycles using 1 5/8" by 3 5/8 " 3M C31 Large Commercial Sponges: Rinse the sponge with cold tap water till no foam was generated before using it for cleaning the soil) (take pic tures of tiles after drying)

Mirapol[®] Surf N also performs on most plastic surfaces: Hydrophilisation & streak-free drying



Summary

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Biodegradable & natural performance polymer for hard surface care

- Inherently ultimately biodegradable
- Naturality >90%
- Recommended addition 0.1 0.25 wt.%

Mirapol[®] Surf N adsorbs on all type of surfaces including plastics, imparting hydrophilisation and long lasting soil repellency. Cleaners formulated with Mirapol[®] Surf N ensure streak-free surfaces that are easy to clean and stay neat longer. Mirapol[®] Surf N comes into powder form with a recommended addition level between 0.1 - 0.25 wt.%. It is stable in a large pH range from 3 to 9.

Benefits

- Biodegradable and natural alternative to synthetic acrylic copolymers
- Easy and long lasting surfaces cleanliness
- Drop in addition



Imprint

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