



# Poly Suga®Phos

100% Natural Poly APG Phosphates

**INCI NAME**    **1000P** Sodium Hydroxypropylphosphate Decylglucoside Crosspolymer  
**1200P** Sodium Hydroxypropylphosphate Laurylglucoside Crosspolymer  
**8600P** Sodium Hydroxypropylphosphate Decylglucoside Crosspolymer (and)  
Sodium Hydroxypropylphosphate Laurylglucoside Crosspolymer

**CAS NUMBER** 1174922-04-3 (1000P & 8600P), 1174922-05-4 (1200P & 8600P)

**LISTINGS**    US (TSCA); EU (REACH Polymer Exempt)

100%  
Natural  
Carbon  
Biobased

**Poly Suga®Phos** series of poly APG phosphates are patented anionic surfactants based on a Polymeric-APG structure of approximately 15,000 molecular weight. They represent advanced technology in the manufacture of “green” surfactants. Poly Suga®Phos products offer formulating advantages over traditional anionic products, as well as being safe for humans and safe for the environment.

Poly Suga®Phos materials are derived from alkyl polyglucosides which come from 100% natural, renewable resources. These starting materials form biodegradable, mild surfactants that function in all types of conditions for personal care applications.



### APPLICATIONS

- Sulfate Free Shampoos
- Hair Relaxers
- Depilatories
- Useful in AHA and BHA products
- Low pH Shampoos
- Facial Cleansers
- Wipes



### BENEFITS

- Made from naturally-derived ingredients
- EO-free, 1,4-Dioxane-free, PEG-free
- MEA-free, DEA-free, Sulfate-free
- Compatible with other anionics
- Useful over a broad pH range
- Extremely mild to eyes and skin
- Does not contain preservatives

### VERY LOW IN IRRITATION

**Poly Suga®Phos** test results include outstanding eye and dermal mildness, especially when compared to other surfactants used in sulfate-free formulations. Poly Suga®Phos 1200P was tested for the series and can be considered indicative for 1000P and 8600P.

#### Eye Irritation

**HET-CAM: Hen's Egg Test Chorioallantoic Membrane:** Practically no ocular irritation potential in vivo, score of **0.5**.

#### Acute Skin Irritation

**48 Hour Occlusive skin patch test:** On human volunteers - 53 Test Subjects: **no** visible skin reaction, **no** potential for dermal irritation.

#### Skin Sensitization

**Repeat Insult Patch testing (HRIPT):** **no** potential for dermal irritation or allergic contact sensitization.

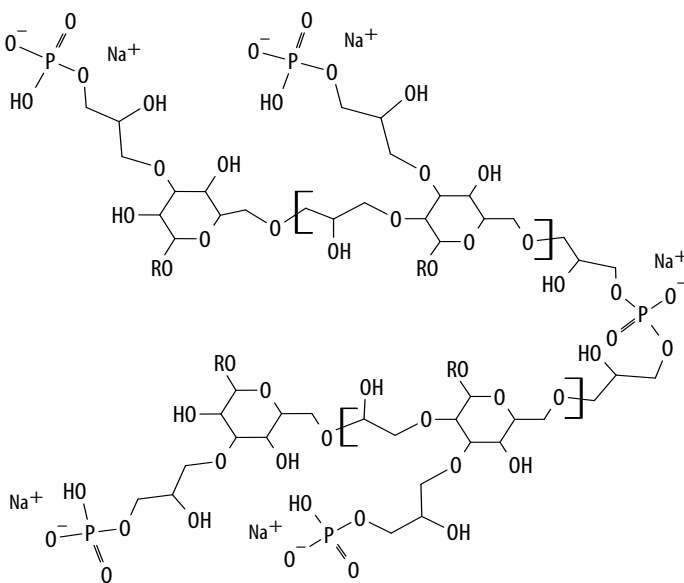


## TYPICAL PROPERTIES / STRUCTURE

	1000P	1200P	8600P
Appearance	Clear Liquid		
pH, 10% aq.	7.0	7.0	7.5
Solids, %	40	40	40
Color, Gardner '98	4 Max	4 Max	4 Max

### Ross-Miles Foam Height (1% active), mm

Immediate	165	135	150
1 minute	145	115	135
5 minutes	140	100	125
Draves Wetting (1% active), seconds	Immediate	6.8	2.5



## BIODEGRADABILITY

Poly Suga®Phos products are readily biodegradable.

## STORAGE / HANDLING

It is recommended that Poly Suga®Phos products be stored in sealed containers at temperatures not exceeding 120°F (49°C). Poly Suga®Phos products are shipped in 55 gallon sealed-head poly drums (net weight 450 lb/204 kg). Typical shelf life is 12 months from date of manufacture. Safety Data Sheets may be found at [www.colonialchem.com](http://www.colonialchem.com).

## Clarifying Shampoo (Sulfate-Free)

No. 1032

This clarifying shampoo frees hair of residue and build-up while antioxidants from Cola®Lipid BP help protect hair.

TRADE NAME / INCI NAME	%
1 Water	qs to 100.00
2 <b>Cola®Teric CBS-HP</b> / Cocamidopropyl Hydroxysultaine	18.00
3 <b>Suga®Nate 160NC</b> / Sodium Laurylglucosides Hydroxypropylsulfonate	11.00
4 <b>Cola®Mate LA-40</b> / Disodium Lauryl Sulfosuccinate	8.00
5 <b>Poly Suga®Phos 8600P</b> / Sodium Hydroxypropylphosphate Decylglucoside Crosspolymer (and) Sodium Hydroxypropylphosphate Laurylglucoside Crosspolymer	4.00
6 <b>Cola®Lipid BP</b> / Sodium Borageamidopropyl PG-Dimonium Chloride Phosphate	2.00
7 Oud Fragrance	0.20
8 Microcare® SB / Sodium Benzoate and Potassium Sorbate	1.00

### PROCEDURE:

Combine ingredients 1-3 and heat to 45-50°C. Add ingredient 4 and mix until completely dissolved. Add ingredients 5-6 while cooling to 40°C. Once below 40°C, add remaining ingredients.

### TYPICAL PROPERTIES:

Appearance: Clear Viscous Liquid  
pH: 5.5 – 6.5  
Viscosity: 5,000 – 10,000 cP

## Facial Wash Gel (Sulfate-Free)

No. 2013

The combination of sulfate-free, betaine-free and naturally-derived components offers a pleasing wash that leaves skin thoroughly cleansed and revived without over-drying or irritating sensitive areas around the face.

TRADE NAME / INCI NAME	%
1 Water	qs to 100.00
2 <b>Suga®Nate 160NC</b> / Sodium Laurylglucosides Hydroxypropylsulfonate	25.00
3 <b>Cola®Teric CBS-HP</b> / Cocamidopropyl Hydroxysultaine	7.00
4 <b>Poly Suga®Phos 1200P</b> / Sodium Hydroxypropylphosphate Laurylglucoside Crosspolymer	3.50
5 Pureact WS Conc / Sodium Methyl Cocoyl Taurate	8.00
6 Kathon™ CG / Methylchloroisothiazolinone and Methylisothiazolinone	0.04
7 Fragrance	0.20

### PROCEDURE:

Combine ingredients 1-3. Heat to 40°C. Add ingredients 5-7. Adjust pH to 6.0.

### TYPICAL PROPERTIES:

Appearance: Clear  
pH: 6.0  
Viscosity: 15,500 cP



## Colonial Chemical

225 Colonial Drive · South Pittsburg, TN 37380

Phone: 423-837-8800 · Fax: 423-837-3888

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

*Innovative Specialty Surfactants*