



Poly Suga®Phos

100% Natural Poly APG Phosphates

INCI NAME **1000P** Sodium Hydroxypropylphosphate Decylglucoside Crosspolymer
1200P Sodium Hydroxypropylphosphate Laurylglucoside Crosspolymer
8600P Sodium Hydroxypropylphosphate Cocoglucoside 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
- Do 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.

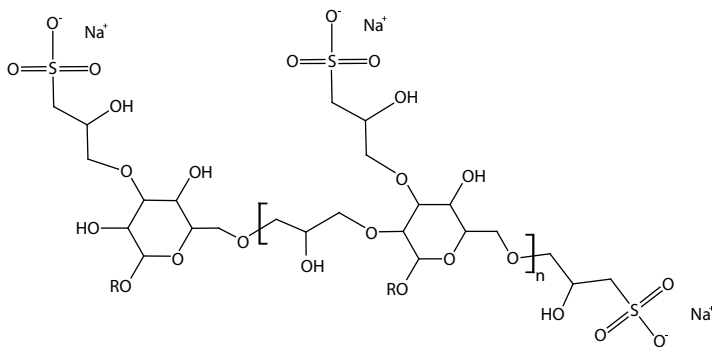


TYPICAL PROPERTIES / STRUCTURE

	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.



Poly Suga®Phos products are certified ingredients with the Natural Products Association.



Poly Suga®Phos products receive a GreenStar™ rating of **10.00**.

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	Cola®Teric CBS-HP / Cocamidopropyl Hydroxysultaine	18.00
3	Suga®Nate 160NC / Sodium Laurylglucosides Hydroxypropylsulfonate	11.00
4	Cola®Mate LA-40 / Disodium Lauryl Sulfosuccinate	8.00
5	Poly Suga®Phos 8600P / Sodium Hydroxypropylphosphate Cocoglucoside Crosspolymer	4.00
6	Cola®Lipid BP / 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	Suga®Nate 160NC / Sodium Laurylglucosides Hydroxypropylsulfonate	25.00
3	Cola®Teric CBS-HP / Cocamidopropyl Hydroxysultaine	7.00
4	Poly Suga®Phos 1200P / 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

Innovative Specialty Surfactants