Poly Suga®Nate 160P NC

Naturally-Derived Poly APG Anionic Surfactant

INCI	Sodium Hydroxypropylsulfonate Laurylglucoside Crosspolymer
CAS	949116-14-7
LISTINGS	TSCA (USA); NDSL (Canada); REACH (EU); IECIC (China); NCSN Certificate (China)

Now 100% Natural Carbon Biobased

Poly Suga®Nate 160P NC is a sulfonated surfactant polymer based on high molecular weight alkyl polyglucoside polymers. Poly Suga®Nate 160P NC is a naturally-derived, high-performance surfactant that provides numerous advantages for a variety of formulations. Poly Suga®Nate 160P NC is extremely mild to both eyes and skin compared to traditional anionic primary personal care surfactants.

BENEFITS

- Naturally derived from renewable sources
- EO free (1,4-Dioxane free)
- Non-irritating to skin, eyes
- Readily biodegradable under any conditions
- Broad pH stability for AHA/BHA cleansers and no-lye relaxers
- Equal or superior foaming characteristics to other sulfate-free surfactants
- Meets broad regulatory requirements
- Shipped without preservatives
- No GHS warnings on label or Safety Data Sheet
- Cost-effective when compared to newest technology sulfate-free surfactants

APPLICATIONS

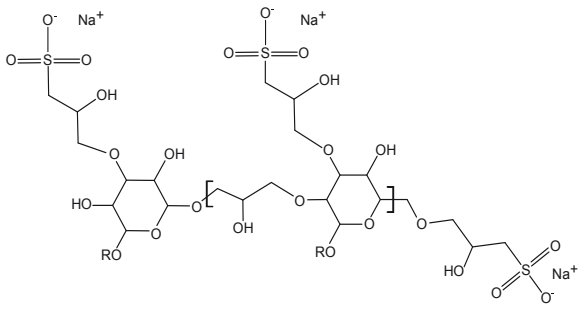
- Sulfate-Free, Low pH Shampoos
- Baby Products
- Mild Bubble Bath
- Bath Gels
- Body Washes
- Facial Cleansers
- Pet Shampoos
- Make-up Removers

TYPICAL PROPERTIES

Appearance	Clear Liquid
pH, 10% aq.	7.0
Solids, %	40.0
Color, Gardner	3 Max.

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

Immediate	150
1 minute	135
5 minutes	130
Draves Wetting (1% active), secs.	7.3



SAFETY

No GHS Warnings

Poly Suga®Nate 160P NC displays ***no GHS warnings*** on its label or Safety Data Sheet.

Eye Irritation

MatTek Epi-Ocular: *In vitroepidermal keratinocytes:* Results indicate 'non-irritating' classification.

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.

Bacteria Mutation

Ames test - *in vitro method of checking for mutagenetic behavior (5.0% active solution):* No detectable genotoxic activity.

ENVIRONMENTAL

100% Biobased

Certified 100% natural carbon via independent testing through the **USDA Biobased** program, allowing for a wide variety of NGO certifications.

Biodegradability

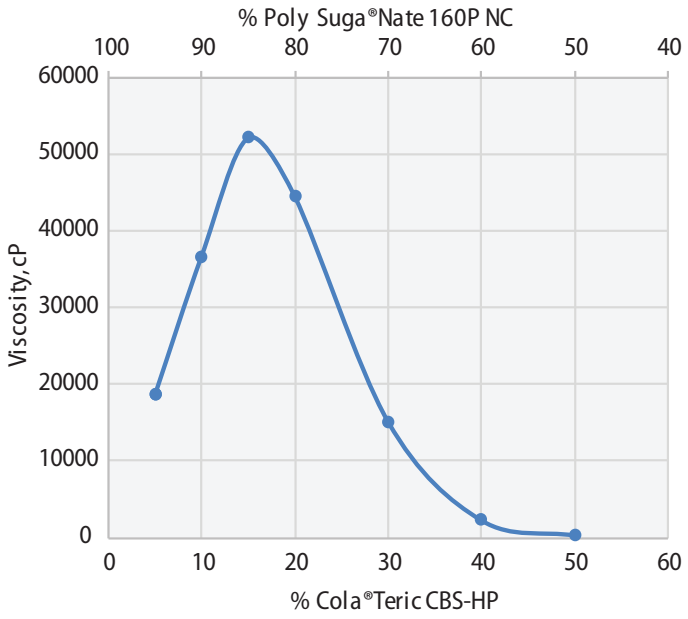
OECD 301 (301D) *Ready biodegradability test in an aerobic aqueous medium:* Sample exceeds 60% biodegradability requirement in six days.

FORMULATING

Combining Poly Suga®Nate 160P NC with a sultaine can produce high viscosity formulations. Combinations of Poly Suga®Nate 160P NC and Cola®Teric CBS-HP are shown in the graph below at various ratios. While commercially viable dilutions and the addition of other ingredients will greatly impact final viscosity, this shows that Poly Suga®Nate 160P NC has variable viscosity response based on the selection and concentration of secondary surfactants.

Recommended Use Levels

15–35% in shampoos, body washes and baby products.



FORMULATION

Anti-Pollution Purifying Shampoo (Sulfate-Free) **No. 1036**

This purifying shampoo deeply cleanses to free hair of product and pollutant buildup without over drying for more vibrant, healthy-looking hair.

	TRADE NAME / INCI NAME	%
1	Water	qs to 100.00
2	***Cola®Teric CBS-HP*** / Cocamidopropyl Hydroxysultaine	20.00
3	***Poly Suga®Nate 160P NC*** / Sodium Hydroxypropylsulfonate Laurylglucoside Crosspolymer	10.00
4	***Cola®Mate LA-40*** / Disodium Lauryl Sulfosuccinate	8.00
5	***Cola®Lipid C*** / Cocamidopropyl PG-Dimonium Chloride Phosphate	2.00
6	Oud Fragrance	0.20
7	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: 5.0 – 5.5
Viscosity: 5,000 – 10,000 cP

FORMULATION

Exfoliating Body Wash (Sulfate-Free) **No. 2049**

Powerful yet gentle wash with natural Jojoba beads that will leave your skin feeling soft and smooth.

	TRADE NAME / INCI NAME	%
1	Water	qs to 100.00
2	Keltrol® CG LAX-T / Xanthan Gum	1.25
3	Glycerin	3.00
4	***Poly Suga®Nate 160P NC*** / Sodium Hydroxypropylsulfonate Laurylglucoside Crosspolymer	15.00
5	***Cola®Teric CBS-HP*** / Cocamidopropyl Hydroxysultaine (Fatty Acid)	10.00
6	***Cola®Mate LA-40*** / Disodium Lauryl Sulfosuccinate	9.00
7	WS Apple Fragrance / Citrus Paradisi (Grapefruit) Peel Oil	0.25
8	Microcare® SB / Sodium Benzoate and Potassium Sorbate	1.00
9	OFJ™ Spheres Watermelon Patch 20/40 / Jojoba Esters	1.00

PROCEDURE:

Disperse xanthan gum in glycerin to create a smooth slurry. Add the slurry to water with moderate mixing. Mix until completely hydrated. Add ingredients 4 – 5 while heating to 45 – 50°C. Once at temperature, add ingredient 6. Mix until completely dissolved. Cool below 40°C and add remaining ingredients with gentle to moderate mixing. Mix until the beads are evenly dispersed.

TYPICAL PROPERTIES:

Appearance: Clear liquid with exfoliating beads
pH: 5.5 – 6.0
Viscosity: 6,000 cP

STORAGE / HANDLING

It is recommended that this product be stored in sealed containers not exceeding 120°F (49°C). Products are shipped in 55-gallon open-head poly drums (net weight 450 lb/204 kg). Typical shelf life is 24 months from date of manufacture. Safety Data Sheets may be found at ***www.colonialchem.com.***

ADDITIONAL NGO LISTINGS

USDA Biopreferred Product Rating of **100**

GreenStar™ Rating of **10.0**

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