

toxicological properties

Evaluation of the Poly Suga®Sil products shows these products to be very mild when compared to other personal care surfactants.

These tests were performed by Consumer Product Testing Co. of Fairfield, NJ.

Eye

The evaluation of Poly Suga®Sil C-35P as an eye irritant was performed using the chorioallantoic membrane technique, with Poly Suga®Sil C-35P diluted to 2 % activity. This test utilizes the inner membrane of a hen's egg to gauge the irritation potential of a compound by visual observation of injurious changes in the membrane. Poly Suga®Sil C-35P was given a score of 0.0 in this test. For comparison, the leading brand of baby shampoo was rated at 11.0 and a top selling adult shampoo was rated at 24.25. Poly Suga®Sil C-35P was rated as having no ocular irritation potential.

Skin

A study was performed adhering to ICH Guideline E6 and 21 CFR parts 50 and 56. The "patch test" was performed with the Poly Suga®Sil C-35P cut to 0.4 % activity. A 1" by 1" absorbent pad was moistened with 0.2 ml of liquid and applied to the backs of the subjects between the scapulae. The patch sites were inspected at 48 hours for gross changes. It was observed that there was a complete absence of skin change. The test sites were evaluated again at 72 hours. Once again the observation was negative skin changes. Under the condition of this test, the test materials, Poly Suga®Sil C-35P did not indicate a potential for dermal irritation.

typical properties

Poly Suga®Sil	C-35P	C-800P
Activity, %	35	35
pH (10% aq)	6 - 8	6 - 8
Color, Gardner	< 3	< 3
Viscosity at 25°C	28	72
Odor	mild, fatty	mild, fatty
Appearance, 10% aq.	Clear	Clear

Ross-Miles Foam Height (1% active), mm		
Immed.	150	120
1 minute	140	110
5 minutes	135	95

Draves Wetting (1% active), seconds	6.0	> 200
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pearlized conditioning shampoo

COMPOUND	Wt. %
Water	37.20
Colonial SLES-2	36.50
Cola®Teric COAB	10.00
Cola®Liquid DC	2.50
Cola®Moist 200	3.00
Poly Suga®Sil C-800P	2.80
Cola®Det LPC	8.00
TOTAL	100.00

PROCEDURE:

Blend ingredients in order given with sufficient agitation until uniform. Adjust pH to 6.0 with 50% citric acid and add 1% - 2% NaCl as needed for increased viscosity.

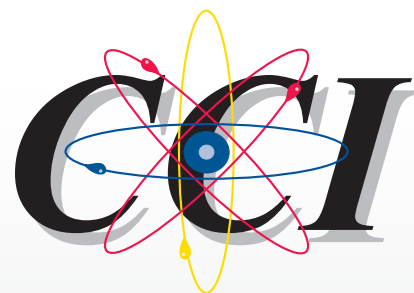
sulfate-free conditioning shampoo

COMPOUND	Wt. %
Water	40.00
Suga®Nate 160	20.00
Sodium methyl cocoyl taurate	12.00
Cola®Teric LMB	12.00
Cola®Mate OPA-30	8.00
Cola®Moist 300P	2.00
Poly Suga®Sil C-35	3.00
Cola®Lipid SAFL	3.00
TOTAL	100.00

Appearance: Clear viscous liquid
10% pH: 5.8
Viscosity: 5000 CPS
Activity: 21.4%

PROCEDURE:

Blend ingredients in order given with mild heat and agitation. Continue blending until clear and uniform, adjust pH to 5.5 - 6.5 with 50% citric acid. Add fragrance, dye, and preservative as needed.



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